Cabinet Policy Committee

In Confidence

POL (07) 302

21 August 2007

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A New Zealand Emissions Trading Scheme: Key Messages and Strategic Issues

On 20 August 2007, Cabinet referred the submission on key messages and strategic issues for a New Zealand emissions trading scheme to the Cabinet Business Committee (CBC) for further consideration [CAB Min (07) 30/9].

As a result of the initial discussion at CBC, and subsequent discussion amongst Ministers, the paper has been revised and referred to POL.

The Minister of Finance and Minister Responsible for Climate Change Issues recommends that the Committee:

1 note that it is intended to contextualise climate change initiatives in general, and the proposed introduction of a New Zealand Emissions Trading Scheme (ETS) in particular, in a sustainability and economic transformation setting;

2 note that the aim is to focus stakeholder and the public's minds on:

2.1 climate change is real and we must do our bit to help the world deal with it. This means we need to reduce our emissions;

2.2 addressing climate change is also central to the government's economic transformation agenda. This agenda seeks to improve productivity, and increase the value of our exports, while advancing long term environmental sustainability. Improved efficiency in the use of energy and natural resources is central to this;

2.3 there are economic opportunities for lower carbon products and services. Sectors such as tourism and viticulture are already planning and investing based on sustainability. Agriculture is also starting to respond. Significant opportunities will also arise for new products and services;

2.4 New Zealand's clean green image is part of the international brand which underpins the premium prices we seek for our products and services. This must be supported by appropriate policies to tackle the environmental challenges we face. Failure to appropriately control greenhouse gas emissions would have trade risks,

in addition to serious environmental and political consequences that unmitigated climate change would bring;

2.5 many of the things we do in the name of climate change achieve other common-sense objectives. Warm, energy efficient homes are healthy homes. Fuel and energy efficiency saves money. Forestry reduces erosion and improves water quality;

2.6 emission trading is both an affordable and sensible approach to reduce emissions. New Zealand is one of a number of countries such as the United Kingdom, Australia and states of the United States developing such schemes. Economic modelling shows the impact on growth is minimal;

2.7 the government will assist households and businesses to adapt and provide a smooth and gradual transition. The high proportion of renewable electricity sources has New Zealand well positioned to make this transition;

3 note that a submission to the Cabinet Policy Committee (POL) is being prepared identifying possible government initiatives to ameliorate the effects of the proposed ETS on targeted groups of New Zealanders and lower barriers to reducing emissions, as well as sources of revenues to fund such initiatives;

4 note that the submission under POL (07) 302 seeks "in-principle agreement" for the core elements of the New Zealand ETS, subject to stakeholder and Maori engagement and a further submission seeking Cabinet's final agreement to each elements of the scheme;

ETS objective and key design features

5 agree in principle, subject to paragraph 4, that New Zealand implement a cap-and-trade emissions trading scheme as part of our climate change response;

6 agree in principle, subject to paragraph 4, that the revised and reformatted objective of the New Zealand ETS is:

"That a New Zealand ETS support and encourage global efforts to reduce greenhouse gas emissions by:

- *reducing New Zealand's net emissions below business-as-usual levels; and*
- *complying with our international obligations, including our Kyoto Protocol obligations;*

while maintaining economic flexibility, equity, and environmental integrity at least cost in the long term".

7 Agree in principle, subject to paragraph 4, to include all sectors and all gases (subject to de minimus considerations);

8 agree in principle, subject to paragraph 4, that a New Zealand ETS be internationally linked;

9 agree in principle, subject to paragraph 4, that the core obligation under a New Zealand ETS be an absolute obligation as opposed to an intensity-based obligation;

10 agree in principle, subject to paragraph 4, to obligations being placed "upstream" in the supply chain;

11 agree in principle, subject to paragraph 4, the following general approach to allocation:

11.1 attempt to maintain broad equity of treatment between and within sectors;

11.2 seek to avoid long term regrets in designing and implementing short run policies;

11.3 make the transition more manageable by being relatively generous in the first commitment period (CP1) which covers the period 2008-2012;

11.4 do not provide assistance to firms whose profits will be largely unaffected by the introduction of an ETS;

11.5 favour assistance via gifting units ('free allocation') as opposed to a progressive obligation, but to leave open the possibility of using a progressive obligation in some sectors;

11.6 move to zero assistance over time for overall economic efficiency, equity and administrative reasons;

12 agree in principle, subject to paragraph 4, to include all sectors and all gases within a New Zealand ETS by 1 January 2013 with sectoral timing of entry into a New Zealand ETS being as follows:

12.1 forestry 1 January 2008;

12.2 liquid fossil fuels 1 January 2009;

12.3 stationary energy and industrial processes 1 January 2010;

12.4 agriculture 1 January 2013;

12.5 waste 1 January 2013;

13 note that although all of these dates of entry are subject to engagement with stakeholders, we intend to indicate that we are relatively firm on the date of introduction for both forestry and liquid fossil fuels;

Process going forward and detailed decision-making

14 note the proposed timing of including sectors within the ETS as set out in recommendation 12 means that engagement material needs to be promulgated to stakeholders as soon as possible;

15 note that on 13 August 2007, the Cabinet Business Committee (CBC) noted the contents of four papers on more detailed ETS design: Rationale for an Emissions Trading Scheme, Design of a Possible New Zealand Emissions Trading Scheme: Core Elements, A Possible New Zealand Emissions Trading Scheme: Timing and Assistance, and The Approach and Process for Engaging on a Possible New Zealand Emissions Trading Scheme ETS [CBC Min (07) 16/2-6];

16 note that a paper on the detailed design of the forestry elements of a New Zealand ETS is being prepared for consideration by the Minister of Forestry, Minister Responsible for Climate Change Issues and Ministry of Finance;

17 authorise the Minister Responsible for Climate Change Issues, the Minister of Finance and Minister of Agriculture and Forestry to direct officials to prepare publicity material, and to prepare drafting instructions, building on the detail in those papers outlined in paragraphs 14 and 16;

18 direct officials, given the instructions implied above, to prepare for consideration by Cabinet's Business Committee (having sought Power to Act) on 3 September 2007:

18.1 a document outlining the context of climate change within the broader sustainability and economic transformation agendas;

18.2 a detailed engagement documentation outlining the proposed New Zealand ETS;

18.3 a companion engagement paper on the forest sector aspects of an ETS; and

18.4 a draft Cabinet paper for identifying possible government initiatives to ameliorate the effects of an ETS on targeted groups of New Zealanders and reduce barriers to lessen emissions (e.g. support for energy efficiency measures), as well as sources of revenues to fund such initiatives, which takes account of discussion at the CBC meeting on 15 August 2007 on recommendation 71 of the paper POL (07) 257: *Design of a Possible New Zealand Emissions Trading Scheme: Core Elements;*

19 invite the Minister Responsible for Climate Change Issues to issue drafting instructions to the Parliamentary Counsel Office for legislation to implement the New Zealand ETS in accordance with the directions provided by the three Ministers above in paragraph 17;

20 note that a phased engagement process with stakeholders and Maori is planned in which some specifics will be proposed but many decisions (and in particular, many sector-specific features) are left open to engagement;

21 note that the indicative timetable outlined above should not preclude actions being taken prior to 1 January 2013 to reduce emissions in the agricultural and horticultural sectors;

22 agree to establish a Climate Change Leadership Group to facilitate discussions between the government and the broader community on sustainability and climate change policy, including the proposed New Zealand Emissions Trading Scheme;

23 agree to the Climate Change Leadership Group Terms of Reference attached as Annex 1 to the submission under POL (07) 302);

24 agree to delegate responsibility for establishing the Climate Change Leadership Group, including agreeing its membership, to the Minister of Finance and the Minister Responsible for Climate Change Issues in consultation with other Ministers as appropriate;

25 note that a number of other sustainability initiatives will be announced during October and November 2007, including the final New Zealand Energy Strategy and New Zealand Energy Efficiency and Conservation Strategy, Final Sustainable Land Management

Action Plan and a discussion paper on Implementing the New Zealand Transport Strategy;

26 direct the Department of Prime Minister and Cabinet with the Ministry for the Environment, Treasury (including the Emissions Trading Group), Ministry of Agriculture and Forestry, Ministry of Economic Development, Ministry of Transport and other appropriate agencies, to coordinate the sustainability and climate change communications including appropriate integration of sustainability initiatives such as the New Zealand Energy Strategy, New Zealand Energy Efficiency and Conservation Strategy, Sustainable Land Management Plan of Action and Implementing the New Zealand Transport Strategy leading up to and during the engagement process;

27 note that given time constraints it will not be possible to use the Government Electronic Tendering Service (GETS) for contracted communications work during the initial stages of the communications process outlined in paragraph 26;

28 direct officials to organise any contracted communications work arising from paragraph 26 so as to ensure significant pieces of work (should any arise) will be able to go through the GETS process;

29 note that the Department of Prime Minister and Cabinet is in discussions with the Office of the Auditor-General on the above process;

30 direct officials to report to POL on what additional funding will be required from the Climate Change contingency to undertake the coordination and communications role set out in paragraph 26;

31 note that linkages exist between the New Zealand ETS and the Permanent Forest Sink Initiative and the East Coast Forestry Project and that changes to these initiatives will be necessary following consultation and to align them with the ETS;.

32 delegate authority to the Minister Responsible for Climate Change Issues, the Minister of Finance and the Minister of Agriculture and Forestry to approve any changes required to the PFSI and ECFP in order to align them with the New Zealand ETS.

Gerrard Carter
for Secretary of the Cabinet

Reference: CAB Min (07) 30/9; CAB (07) 402

Copies to: (see over)

Copies to:
Cabinet Policy Committee
Chief Executive, DPMC
Director PAG, DPMC
PAG Subject Advisor, DPMC
Secretary to the Treasury
Director-General, Ministry of Agriculture and Forestry (Agriculture)
Director-General, Ministry of Agriculture and Forestry (Forestry)
Chief Executive, Ministry of Research, Science and Technology
Chief Executive, Ministry of Social Development
Secretary of Foreign Affairs and Trade
State Services Commissioner
Secretary for Transport
Chief Executive, Ministry of Economic Development
Chief Executive, Te Puni Kokiri
Minister of Conservation
Director-General of Conservation
Minister of Commerce
Chief Executive, Ministry of Economic Development (RIAU)
Minister of Energy
Chief Executive, Ministry of Economic Development (Energy)
Secretary for the Environment (Energy Efficiency Conservation Authority)
Secretary for the Environment (Climate Change)
Secretary for the Environment

Office of the Minister of Finance
Office of the Minister Responsible for Climate Change Issues

Chair
CABINET BUSINESS COMMITTEE

A NEW ZEALAND EMISSIONS TRADING SCHEME: KEY MESSAGES AND STRATEGIC ISSUES

Executive Summary

1. In the context of the broader sustainability and economic transformation agenda, it is proposed to introduce a New Zealand Emissions Trading Scheme (NZ ETS) as part of New Zealand's response to the challenges of climate change.

2. This paper outlines to Cabinet the general approach within which to frame climate change initiatives in general, and the proposed introduction of a NZ ETS in particular; seeks Cabinet's agreement-in-principle to introduce a NZ ETS; and also seeks Cabinet's agreement-in-principle to key design features of a NZ ETS. A companion Cabinet paper is being prepared on possible government initiatives to ameliorate the effects of an ETS on target groups of New Zealanders, and on lowering barriers to reducing emissions (e.g. supporting the uptake of energy efficiency measures) is being prepared. This companion paper will also examine sources of revenues to fund such initiatives.

3. This paper proposes a slight modification to the objective of the proposed NZ ETS as well as outlining key design details. These are summarised as follows.

Key Design Issue	Implication	Comment
Cap-and-trade scheme (cf. tax) *Paragraph 24*	Quantity of emissions that participants have responsibility for fixed, price variable (cf. vice versa for tax)	Fits with international trend and Kyoto Gives more certainty over emission reductions Has broad public support
Neutral between domestic and international emission reductions *Paragraph 28*	Will achieve an efficient mix of domestic and international emission reductions	Material domestic reductions likely in short term and significantly more in the longer term Can also use measures outside the scheme to favour domestic reductions
All sectors, all gases *Paragraph 31*	First domestic scheme in the world to include obligation for agriculture (methane, nitrous oxide)	Fairness and efficiency considerations suggest all sectors play their part otherwise some sectors will carry others Given New Zealand's emissions profile not credible to exclude agriculture
Internationally linked ETS	Price = international price (approx.)	Price likely to be lower than under a

Paragraph 32		non-linked scheme (i.e. lower cost to the economy) Consistent with global problem and Kyoto
Absolute obligation (cf. intensity-based) *Paragraph 34*	Even if an emitter is at world best practice in terms of emissions per unit of output, they will still be affected	Greater certainty for environmental outcome, namely total emissions Consistent with Kyoto Could be amended for future international agreements
Obligations mostly "upstream" (i.e. at fuel supplier, not car owner, but the price flows through) *Paragraph 38*	Will be about 200 participants in the scheme (excl. forestry) – everyone feels a price impact	Lower administrative costs due to relatively few participants
Approach to Assistance		
Be generous in 2008-2012 *Paragraph 50*	Kyoto fiscal risk not managed as well as it could be Some sectors will only pay for growth in emissions, not total emissions	Main aim is to get a long run scheme in place, so it's worth it for greater acceptability in the short term But still a risk that targeted generosity could lower acceptability if some sectors feel aggrieved
Favour assistance via gifting units ('free allocation') (cf. progressive obligation, i.e. gradually increasing the obligation to have units covering emissions) *Paragraph 55*	Emitters face the full price signal at the margin early on	Allocation protects profit, not price Assistance provided either way, but it's more important to maintain price signal at the margin (progressive obligation dampens the price signal)
Move to zero free allocation in long run *Paragraph 58*	All sectors ultimately (after a lengthy period) face the full cost of their total emissions	Based on efficiency, equity and administrative benefits, but likely to attract criticism
Proposed Free Allocation		
No free allocation – liquid fossil fuels, stationary energy (including electricity generation) *Paragraph 52*	Consumers will feel the full price impact on fuel and electricity	Prices likely to be passed through even if free allocation used (allocation protects profit, not price) Heavy fuel users likely to argue for assistance Measures proposed to mitigate consumer impact
Yes – LULUCF, industrials (process and stationary energy but not liquid fossil fuels), agriculture *Paragraph 52*	Pre-1990 forest owners get free allocation for deforestation; post-1989 forest owners get credits for afforestation and liabilities for deforestation Assistance to industry where there would be long-term regrets from reduced production/closure and will include support for electricity price rises	Inter-sector equity a main objective Forestry proposals broadly in line with consultation Some will argue for greater assistance to industry, others less for agriculture

Timing of Entry		
All sectors in by 1 Jan 2013 *Paragraph 63*	End-point of transition is signalled – by the start of next commitment period (or whatever is post-Kyoto), all sectors will be in	Some will argue this is too soon, but it puts price signal in place for the long term Profit impacts can be mitigated via assistance
Staged entry proposed (forestry, liquid fossil fuels, stationary energy, industry, agriculture, waste) *Paragraph 63*	Some sectors are in before others	Proposed staging based mainly on preparedness of entry [subject to stakeholder engagement]
Forestry from 1 January 2008 *Paragraph 63*	Retrospective from enactment of legislation	Important to prevent pre-emptive deforestation
Agriculture from 1 January 2013 *Paragraph 63*	Consistent with 2002 govt policy and 2003 MoU	Relatively late entry may draw adverse reaction from other sectors of the economy Sector to be encouraged to be active earlier (measurement and reporting, preparing for entry)

Climate Change, Emissions Trading and Sustainability

4. We propose that the government's response to climate change, and the Emission Trading Scheme Framework, is communicated within the context of sustainability and economic transformation. The proposed key messages are:

- Climate change is real and we must do our bit to help the world deal with it. This means we need to reduce our emissions.
- Addressing climate change is also central to the government's economic transformation agenda. This agenda seeks to improve productivity, and increase the value of our exports, while advancing long term environmental sustainability. Improved efficiency in the use of energy and natural resources is central to this.
- There are economic opportunities for lower carbon products and services. Sectors such as tourism and viticulture are already planning and investing based on sustainability. Agriculture is also starting to respond. Significant opportunities will also arise for new products and services.
- New Zealand's clean green image is part of the international brand which underpins the premium prices we seek for our products and services. This must be supported by appropriate policies to tackle the environmental challenges we face. Failure to appropriately control greenhouse gas emissions would have trade risks, in addition to serious environmental and political consequences that unmitigated climate change would bring.
- Many of the things we do in the name of climate change achieve other commonsense objectives. Warm, energy efficient homes are healthy homes. Fuel and energy efficiency saves money. Forestry reduces erosion and improves water quality.

- Emission trading is both an affordable and sensible approach to reduce emissions. NZ is one of a number of countries such as the UK, Australia and US States developing such schemes. Economic modelling shows the impact on growth is minimal.

- The government will assist households and businesses to adapt and provide a smooth and gradual transition. The high proportion of renewable electricity sources has New Zealand well positioned to make this transition

5. Climate change is an unprecedented challenge – for the global community, for the world environment, for the world economy – and therefore for New Zealand as well. Its scale and reach is judged to be significant enough to represent a threat to the way we live on the planet. If the worst predictions about climate change and tipping points were to come to pass, the impacts for life on earth would be severe. They cannot be ignored. This generation owes it to those who are yet to come to engage effectively with this very large issue.

6. Although climate change is thought of as principally an environmental issue, without significant mitigation it will have major economic, social and even political ramifications. Taking effective action globally – and nationally - to reduce emissions from, and the emissions intensity of, human activity is now a matter of urgency for all economies, all businesses, all communities, and all citizens. Over coming decades, dealing effectively with climate change will be at the heart of our sustainability and economic transformation agendas. An early start is required. Fortunately many of the actions required are also commonsense practical measures with other benefits such as to air and water quality.

7. The effects of climate change on New Zealand is going to be determined by human impacts on the environment in other parts of the world, and also by responses from customers in other countries to how New Zealanders themselves behave. Responses are required, both to meet the climate change challenge itself, and changed expectations from our international partners.

8. New Zealand has, in fact, taken action over much of its short history to improve management of its natural environment – of its fisheries, lands, forests (especially unique native forests) and waterways. We have taken a lead to protect biodiversity, improve biosecurity, and restore endangered species – where our early record was not good. The drive to look after our environment is now well-embedded in our communities – something we have learnt from past experience. We now need to broaden that environmental awareness into a more sustainable way of living. Much needs to be done. The key issue is to change the way we think about our living environment – and about how we can sustain and improve our lives without damaging our part of the global village. We need to earn our living in a way that doesn't damage our eco-capital.

9. Climate change is clearly a very long term issue. We need to think in very different ways to deal with it. This paper sets out an important further step for New Zealand which is designed to create a future for New Zealand that is truly sustainable. Climate change presents both significant threats and striking opportunities for New Zealanders. We start from a relatively favoured situation with high levels of renewable electricity generation, and low population density. Forest cover is extensive, we enjoy a temperate climate, and awareness of environmental issues is well-established. But we also face challenges. Much of our economy is based on biological industries. We are distant from markets and customers, including our tourism markets. Our topography and low population deny us options other societies enjoy. Our response to climate change must reflect our own particular national circumstances, and be directed towards New Zealand's interests, as well as global solutions.

10. Making a start in restraining and reducing our greenhouse gas emissions - on the long path towards a sustainable future and carbon neutrality - is the initial challenge. That is the purpose of the measures proposed in this paper. Internationally, it is recognised that introducing an Emissions Trading Scheme is an equitable, effective and efficient way to reduce greenhouse gas emissions.

11. Under such a scheme, prices are established for units to emit greenhouse gases. Those prices then influence decisions throughout the economy by producers, consumers, and investors, driving the reduction of emissions and the expansion of more environmentally friendly alternatives. The introduction of an effective emissions trading system can be seen as a core building block for the transformation of our economy. We have not had to consider till now how the gases emitted in the course of daily living impact on what our world might become. We now have to do that.

12. The emissions trading scheme proposed in this paper has been drawn up by officials through an intensive process of analysis and policy development. The work has been informed by the experiences of other jurisdictions that have already introduced such trading systems. Success in the United States with the sulphur dioxide emissions trading system provides evidence the concept can deliver sustained reductions in emissions, through individual businesses taking decisions in the face of revised price signals.

13. The design concept of this proposed ETS is bold, covering all sectors of the economy and all greenhouse gases, a world first. In New Zealand, unusually, half of all greenhouse gas emissions come from pastoral agriculture. Therefore it would not be credible to leave agriculture[1] out. Although we will be the first country to tackle agricultural emissions in this way we are proposing a gradual transition focussing largely on influencing growth in emissions. Given the increasing international effort to curb emissions, a future cost to the economy is likely. It is in our interest to reduce that future cost by taking steps now to reduce our future emissions.

14. Taking effective domestic action needs to be seen both as shouldering responsibility for managing the reduction of emissions, and as creating the platform upon which New Zealand can contribute internationally to achieving a broad and effective global action. We are respected worldwide for being a leader on environmental and nuclear issues. We trade on this brand in our two biggest sectors – tourism and primary production. Our ability to protect this source of value relies on our clean green brand being reflected in clean green practice. Our ability to lead on these issues internationally, and to grasp the opportunities for New Zealanders to give substance to the ethos of the "100% Pure" New Zealand branding, depends on the progress we make to become more sustainable.

15. In terms of impacts, it must be remembered that regardless of whether New Zealand introduces an emissions trading scheme or not, there will be costs on the economy as a result of global efforts to reduce greenhouse gas emissions. New Zealand has already agreed to meet its share of these costs, up to 2012, by ratifying the Kyoto Protocol. Economic modelling predicts the costs of Kyoto will knock as little as 0.1% off New Zealand's anticipated GDP growth of around 15% between 2005 and 2010.

16. The proposed emissions trading scheme is intended to play a key part in the drive to transform the economy. Many businesses in New Zealand are already facing pressures from their customers to explain how their products and services are produced, what their carbon footprint is, how they compare with competitors' products. These businesses have indicated that improving our sustainability can be a competitive advantage for New Zealand, in a global marketplace where traceability, supply chain management, product carbon-rating, and the health attributes of food are of increasing concern. New Zealand's strong track record in areas such as agricultural science, product innovation, food safety, animal health, fisheries and forestry management give us competitive strengths. We can build on that base.

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1 In this paper, unless specified otherwise, agriculture means pastoral and arable farming as well as horticulture.

Through this emissions trading scheme, government believes it can strengthen New Zealand's long term economic competitiveness, contribute to mitigating risks of a major global threat, and improve our national environment.

17. The ETS will encourage more planting and retention of forests. It will also facilitate increased renewable electricity generation – even though New Zealand is already a world leader in this sector. It will encourage different ways of travel, particularly those using less carbon-intensive technologies. Through reflecting the cost of emissions in the prices of products and services, the ETS will encourage investment in new technologies, in carbon storage, and in improvements in industrial processes and in energy-efficient design. There is no reason why New Zealand firms, entrepreneurs, farmers and researchers shouldn't have a leading role in developing new and better ways of making our living in a more sustainable way. New Zealand is already a world leader in existing technology in key areas like agriculture, forestry, and bio-technology. There will be significant new economic opportunities for those sectors as they are at the forefront of the development of new carbon-friendly technologies.

18. Action taken to reduce emissions will also help to improve the environment. It will improve air quality and water quality; reduce erosion, use of nutrients, and flooding; and protect our indigenous forests and biodiversity. It will improve domestic energy security by developing domestic renewable energy sources. It will help to conserve valuable non-renewable resources for use by future generations.

19. The necessary changes to building a more sustainable New Zealand will extend over several decades. Significant investments will have to be made. An important initial focus will be to cushion some of the impacts of changing relative prices on individuals, households and businesses as we begin to embark on longer-term changes. Government will seek to play a constructive role in facilitating adoption of energy efficiency measures by businesses and households.

Rationale for an ETS

20. Regardless of whether or not New Zealand introduces an emissions trading scheme or not, there will be some costs to the economy as a result of global efforts to reduce greenhouse gas emissions. New Zealand has already agreed to meet its share of these costs up to 2012 by ratifying the Kyoto Protocol (New Zealand has also signalled that it is willing to consider future international climate change commitments). The scale of the costs of climate change mitigation on the New Zealand economy is driven primarily by the stringency and nature of international climate change agreements (Kyoto and future agreements) and the degree to which New Zealand adopts them.

21. There is a range of potential policy responses to climate change, including emissions trading, a carbon tax, incentives to reduce emissions, direct regulatory measures, and voluntary agreements to reduce greenhouse gas emissions. Not all of the options are mutually exclusive. It is clear that the appropriate New Zealand response to the climate change challenge will involve a range of initiatives and a range of types of initiatives.

22. An emissions tax and an emissions trading scheme have much in common. Both place an obligation on firms and industries whose activities are associated with the production of emissions, requiring them to report on their emissions output and take financial responsibility for their emissions or face a penalty. As a result, the environmental cost of emissions is reflected in the price of goods and services throughout the economy.

23. The key conceptual difference between an emissions trading scheme and an emissions tax is that: a tax sets the **price** emitters have to pay per unit of emissions, and leaves individuals and companies to decide how much to reduce their emissions; while under an ETS governments set the aggregate **quantity** of emissions, and leaves the market to

determine the price of emission units, and therefore the cost per unit of emissions that firms and individuals will face.

Decision 1: IMPLEMENT AN ETS AS PART OF GOVERNMENT RESPONSE TO CLIMATE CHANGE – (recommendation 5)

24. There are five main reasons why we recommend the introduction of a broad-based internationally linked, cap and trade emissions trading scheme as part of our preferred domestic policy response to climate change (note that an ETS is a policy tool aimed at reducing emissions whereas other climate change related initiatives are aimed at other aspects of the climate change challenge – e.g. adapting to the effects of climate change):

- **Global response:** Emissions trading is emerging as the preferred mechanism to incorporate a price of greenhouse gas emissions into the economic decision-making of developed countries. The Kyoto Protocol itself is a global cap-and-trade system;
- **Environmental integrity:** The science of climate change directs us to control the quantity of our emissions and an emissions trading scheme can give us certainty about the level of emissions for which we are responsible;
- **Flexibility:** An ETS allows the price of emissions to change in order that the emissions cap is not exceeded. With an internationally-linked emissions trading scheme, the price of units would track the international price of emissions, whereas with a tax there would also be a trade off and estimation uncertainty which makes it difficult to set at the correct level to ensure appropriate emissions reductions;
- **Least cost:** An ETS gives firms the flexibility to choose their best response to the emissions price in the economy – and given international linking – the world price of emissions that New Zealand as a nation faces; and
- **Support for emissions trading:** consultation on the five discussion documents released in December 2006 indicated a wide, although not universal, preference for emissions trading as the primary means of managing New Zealand's greenhouse gas emissions in the long term.[2]

Objective of a New Zealand Emissions Trading Scheme (NZ ETS)

25. Cabinet previously agreed [POL Min (07) 11/24] that the overall objective for the proposed New Zealand Emissions Trading Scheme (ETS) is:

> *"That a New Zealand ETS support and encourage global efforts to reduce greenhouse gas emissions by reducing New Zealand's net future emissions below business-as-usual levels, and complying with our international obligations, including our Kyoto Protocol obligations, while maintaining economic flexibility, and environmental integrity, at least cost in the long term".*

26. We propose that this objective be modified by the addition of the word equity to explicitly recognise that equity considerations are integral to the challenge of developing and implementing an NZ ETS. In this context, equity includes consideration of the ability of consumers to pay, fair burden sharing between and within sectors, and fair burden sharing

2 Some commentators have recently argued that a tax is preferable. Their argument is that uncertainty over the level of emission reductions that will occur is relatively costless in the short to medium term, as it is long term increases in the level of greenhouse gases in the atmosphere that matter. In contrast, they argue that uncertainty over the level of the price emitters will be required to pay to cover their emissions matters far more in the short term, as it will have a real impact on investment decisions.

between taxpayers and the private sector. In addition, we propose that the word *"future"* be removed from the phrase *"net future emissions"* because it is redundant.

Decision 2: MODIFIED OBJECTIVE FOR A NZ ETS – (recommendation 6)

27. The proposed revised objective follows, reformatted, with the word *equity* emphasised and the word *future* removed:

> *"That a New Zealand ETS support and encourage global efforts to reduce greenhouse gas emissions by:*
>
> - *reducing New Zealand's net emissions below business-as-usual levels; and*
> - *complying with our international obligations, including our Kyoto Protocol obligations;*
>
> *while maintaining economic flexibility, **equity**, and environmental integrity at least cost in the long term".*

28. The proposed objective does not specify a preference for domestic emission reductions relative to reductions supported overseas in the form of units purchased from other Kyoto parties. There is no greater reduction to global ambient emissions concentrations from reducing emissions in New Zealand as opposed to another location. If we did specify a level of domestic emissions reductions, the scheme could have larger price impacts where this prevents firms from supporting less costly emissions reductions offshore, with no commensurate environmental benefit.

29. Having said this, analysis suggests that there should be significant domestic emission reductions, especially in the longer term. These reductions can be further encouraged through complementary measures outside of the ETS.

Key design features of the Proposed NZ ETS

30. This section of the paper outlines some of the key design features implicit in the proposed NZ ETS.

Decision 3: INCLUSION OF ALL SECTORS AND ALL GASES – (recommendation 7)

31. It is proposed that, over time, **all sectors and all gases** will be included in a NZ ETS, subject to de minimus considerations. Exempting one sector of the economy simply raises the costs faced by other sectors and the economy as a whole. Broad coverage also reflects the science of climate change: emissions have the same impact on the environment, regardless of the type of emission source or its location.

Decision 4: INTERNATIONAL LINKING OF A NZ ETS – (recommendation 8)

32. **International linking** of a NZ ETS is considered to be critical. The objective of a NZ ETS includes a focus on emission reductions at least cost in the long term. This supports the design of a NZ ETS that is linked with other trading regimes because the wider the coverage of the scheme, the greater the chances for least-cost abatement options being utilised.

33. Linking to other schemes (or more precisely, linking to international carbon markets developed under the Kyoto Protocol) will help ensure that the price of emission units in New Zealand is determined by the international market. This is essential for a small market like New Zealand, since it will aid liquidity in the market and act as a safety valve on price.

Decision 5: INTRODUCING A NZ ETS ON AN ABSOLUTE BASIS – (recommendation 9)

34. Under an ETS, Participants' obligations to surrender units can be defined on an absolute basis (where the number of units surrendered is related to the number of tonnes of emissions) or an intensity basis (one unit for each tonne of emissions per unit of activity). It is proposed that **a NZ ETS operates on an absolute basis** as opposed to an intensity basis.

35. An absolute approach has two key advantages: it provides certainty over the (global) environmental outcome, because all emissions are covered by an obligation to surrender units. This approach is also relatively simple to understand and implement. It is consistent with New Zealand's obligations under the Kyoto Protocol, which are expressed in an absolute and not intensity basis. If future international climate change agreements were to include intensity-based approaches (the so-called sectoral agreements that are being considered in the steel, cement and aluminium sectors), then it would be more appropriate to reflect an intensity-based approach in New Zealand's domestic policy settings for those sectors.

36. Intensity-based approaches on the other hand are administratively difficult. This is firstly because a benchmark, normally based on international practice, has to be determined. Secondly, firms have to compare their intensity with the benchmark, and the regulator has to verify that they have done so correctly. The NGA experience suggests that determining an appropriate benchmark – or world's best practice line – across a wide range of sectors, industries and firms would be time-consuming, more costly and problematic.

37. Furthermore, intensity approaches provide insufficient incentives for firms to reduce aggregate emissions. As such, it is inconsistent with New Zealand's obligations under the Kyoto Protocol and with the proposed objective of the NZ ETS. In fact, under an intensity approach, it would be possible for firms to grow their output, grow their emissions, and receive units from the government, all at the same time.

Decision 6: OBLIGATIONS MAINLY UPSTREAM IN A NZ ETS – (recommendation 10)

38. An ETS imposes obligations on entities responsible for emissions. Which entities have obligations depends on where in the supply chain the ETS places the point of obligation. While an ETS is directed at emissions, it is not necessary to place the obligation on the actual emitter. This is because markets will shift the costs of an ETS to consumers or producers downstream, who may themselves be the emitters. Given this, there are choices about where to place the point of obligation and still meet the objectives of an ETS.

39. In all sectors except forestry (and potentially agriculture in the longer term), it is suggested on the basis of cost management, coverage, feasibility and creating incentives that is it appropriate to suggest placing points of obligation which:

- Are few in number;
- Have greater administrative and technical ability to meet ETS-type obligations; and
- Are able to shift the costs of an ETS to the actual emitter.

40. This results in points of obligation being placed upstream (e.g. fuel suppliers as opposed to individual motorists). In New Zealand, with its small number of large players in most markets, there are particular compliance and administration cost advantages in having upstream points of obligation.

41. A possible exception (to be resolved following stakeholder engagement) to the preference to upstream points of obligation is the case of the very largest users of coal and gas, who are primarily major electricity generators and industries that generate their own power. These firms may be better able to manage their emissions and financial risks if they are points of obligation themselves. In the agricultural sector, initial preference is for a processor/company level (downstream) obligation rather than a farm level (upstream) obligation for animal nitrous oxide and methane emissions. For fertiliser nitrous oxide emissions, the initial preference is for an upstream obligation on fertiliser companies.

Assistance to Business

42. Decisions on assistance to business (in this context business includes industry as well as the agricultural and forestry sectors) are important in ensuring that the costs and benefits of an ETS are shared fairly across consumers, firms, sectors, and tax payers, and that the New Zealand economy can effectively transition over 1-2 decades effectively to a point where the cost of emissions is fully integrated through the economy.

43. The primary rationale of an ETS business assistance package should be to help to deliver an equitable sharing of the costs to assist in ensuring that the transition of the economy is as fair and effective as possible. The government may wish to provide assistance to business where:

- The reduction in output, or closure, of a New Zealand firm would lead to economic regrets in the longer term, such as where the firm would have been competitive if its competitors faced greenhouse gas measures of a similar magnitude to those under the ETS in New Zealand (and where there is a reasonable prospect that those international competitors will face similar greenhouse gas measures within the foreseeable future);

- Particularly large or concentrated job losses would otherwise occur, especially in less well populated regions; and

- New Zealand's reputation as a good place to do business relative to its neighbours and trading partners was damaged.

44. The government has two broad options available for providing assistance to business. The first is to gift emission units to those businesses expected to be most heavily affected by the introduction of the scheme. This option is referred to as 'free allocation'. The number of units given to each business would be determined by their share of the relevant industry's overall emissions in a recent, historic year (e.g. a level of free allocation could be (say) 90% of 2004 levels of emissions). To maintain strong incentives to reduce emissions, the level of units given to each firm over time would ideally not be adjusted to reflect changes in their emissions or output levels. The units that are gifted will have considerable value. The firms that receive them (which will not always be those with an obligation to report emissions and surrender units) will be able to use them to help to meet the cost of their emissions, or sell them.

45. The second option is for the government to reduce the extent of the obligation on businesses to surrender units to cover their emissions. This option is referred to as a 'progressive obligation'. Under this option, the obligation to surrender New Zealand Units (NZUs) to cover emissions would initially be reduced. Instead of a full obligation to surrender one NZU for every tonne of emissions, businesses would initially only be required to surrender one unit for every, say, five tonnes of emissions. Over time, this obligation would be steadily increased to the full obligation. This progressive obligation approach would directly reduce the costs faced by businesses.

Decision 7: GENERAL APPROACH TO ALLOCATION – (recommendation 11)

46. Regardless of which of these two approaches the government chooses, assistance to business will be subject to close scrutiny and will be controversial. The following general approach to allocation is proposed:

a. Attempt to maintain broad equity of treatment between and within sectors;

b. Seek to avoid long term regrets in designing and implementing short run policies;

c. Make the transition more manageable by being relatively generous in the first commitment period (CP1) which covers the period 2008-2012;

d. Do not provide assistance to firms whose profits will be largely unaffected by the introduction of an ETS;

e. Favour assistance via gifting units ('free allocation') as opposed to a progressive obligation, but to leave open the possibility of using a progressive obligation in some sectors; and

f. Move to zero assistance over time for overall economic efficiency, equity and administrative reasons.

47. Each of these points is discussed below.

Broad equity of treatment between and within sectors

48. Decisions to give high levels of assistance to particular sectors are likely to come at the expense of reduced levels of generosity elsewhere. While an equitable sharing of the cost of the ETS will not always be straightforward to define, clearly inequitable treatment of particular firms or sectors would undermine the government's broader objectives.

Seek to avoid long term regrets

49. As noted, the transformation of New Zealand to a lower carbon economy will take a number of decades. Short term decisions that have the potential to undermine this longer term objective should be avoided.

Generous levels of assistance in 2008-2012

50. The evolution of New Zealand to an increasingly low carbon economy will take sustained effort over a number of decades. The long term efficacy and sustainability of the ETS is therefore paramount. Relatively generous initial levels of assistance are recommended in recognition of the fact that businesses will need time to lower their emissions, and that relatively broad support will be needed to implement an effective and high quality ETS.

No assistance to firms whose profits will be largely unaffected

51. Many firms, especially those selling their products and services domestically, will be able to pass a significant portion of the costs they face under the ETS on to their customers. The impact on the profits of these firms will be limited. Consequently, providing a level of assistance to them would boost their profits but not result in any reduction in emissions.

52. The practical manifestation of not providing assistance to firms whose profits will largely be unaffected is that there would be no free allocation provided to fossil fuel providers or to electricity generators. In these areas, it is anticipated that the costs associated with the purchase of emission units are likely to be passed through the supply chain to consumers regardless of any level of free allocation of emissions units. In contrast, it is proposed to provide assistance (for a time at least) to the agricultural, industrial and forestry sectors.

Preference for free allocation

53. There are clear trade-offs between the free allocation and progressive obligation approaches. Free allocation approaches:

- Will provide a stronger economic signal to reduce emissions (both demand and supply side) as firms are exposed to the full cost of emissions at the margin as soon as they enter the scheme;
- Are not so vulnerable to policy changes in terms of incentives on firms to reduce emissions, given that the full cost signal is in place;
- Will more accurately provide support to firms for whom there may be regrets if closure were to occur; and
- Limits the fiscal exposure for government;

BUT

- Would be significantly more administratively complex;
- Does not deal with new entrants as well as a progressive obligation approach; and
- Will not lead to any assistance being given to households or businesses that fail to meet whatever eligibility criteria are put in place.

54. The advantages and disadvantages of the progressive obligation approach are the opposite of this. It is most suited to parts of the economy in which:

- Defining which firms to target is problematic, and
- It is more important to influence long term investment decisions than short-term decisions.

55. We have a general preference for using free allocation as the primary assistance tool. Having said this, the use of a progressive obligation vis-à-vis stationary energy, and also in the agriculture sector is not ruled out and will be subject to the engagement process.

56. If a progressive obligation is to be used, it is most suitable in the stationary energy sector. That is because there is relatively little growth in emissions forecast from stationary energy, and therefore signals to effectively influence long term investment decisions are critical, while strong signals to reduce emissions in the short term are less important. The progressive obligation approach for stationary energy would also overcome the difficulties inherent in attempting to identify the downstream energy users that qualify for assistance.

57. As an example, if a progressive obligation was adopted for agriculture starting (say) in 2013 and progressively increasing by 10% each year, it would not be until 2023 that the sector would face the full marginal cost (and benefits) for emission increases (and decreases).

Move to zero levels of assistance over time

58. There are strong benefits in the government attempting to clarify its intentions for post 2012 assistance to business as much as possible before introducing the scheme. This should help to reduce the complexity and contentiousness of future decisions on assistance policies, and provide greater certainty to industry.[3]

59. The government has considerable flexibility in setting its post 2012 assistance policies. An ultimate move to **zero assistance** is clearly preferred for efficiency (assuming effective revenue recycling), equity and administrative reasons. Moving to zero levels of assistance also avoids the inequities that can arise between sectors that are, and are not, receiving assistance (e.g. agriculture v fisheries). Also, where the free allocation approach is used, inequities may arise within sectors between those firms that receive units because they were in operation before the scheme started, and those firms that entered the market afterwards.

60. If the government were to move to (or towards) providing zero assistance in time then it is likely that the government would make emission units available to participants in a NZ ETS through regular auctions. This would provide revenue for government (that could be recycled) and would also increase the liquidity in the market.

61. If assistance is to be provided for longer than, say, 15 years, difficult choices over how to proceed become more prominent. Where the progressive obligation approach is used, emissions are likely to remain well above the levels they would be if businesses faced the full cost of their emissions, putting increased costs on government or other sectors. In turn, under the free allocation approach, the government will face an awkward choice between: continuing with the use of the same historic baseline year (such as 2004) and allowing the level of units given to individual businesses to diverge from their actual levels of output and profits; or updating the baseline year used to determine each firm's allocation, which is likely to weaken the effectiveness of the price signals provided by the ETS.

62. While the full phasing out of assistance – be it in the form of free allocation or a progressive obligation – is preferable on policy grounds (and is recommended), it would not be in keeping with current international norms and would be likely to attract heavy criticism. Further, it is important to note that an ETS can operate totally effectively without moving to zero levels of assistance.

3 Some flexibility has to be built into such an approach to deal with the possibility of different international arrangements being relevant post 2012.

Timing of Entry

63. We propose a staged entry of different sectors into the ETS with all emitting sectors being included in a NZ ETS by 1 January 2013 (subject to de minimus considerations). The table below sets out our view of when individual sectors should be brought into the ETS. This balances initial views on preparedness to enter an ETS[4] with a desire to manage overall administrative issues as well as managing price effects through the economy.[5]

Decision 8: PROPOSED TIMING OF ENTRY – (recommendation 12)

Table 1: Proposed Dates of Commencement for Different Sectors

Sectors	Commencement of Monitoring and Reporting	End of initial compliance period
Land Use, Land Use Change and Forestry (LULUCF)	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 (coal etc - includes electricity generation)	1 January 2010	31 December 2010
Industrial process emissions	1 January 2010	31 December 2010
Agriculture	1 January 2013	31 December 2013
Waste	1 January 2013	31 December 2013

64. There are two quite distinct elements of the forestry industry vis-à-vis an ETS – namely the treatment of forests planted on land that was not in forest in 1989 and the removal of forest and change in land use of land that was in forest in 1989. It is proposed to include both of these elements in an ETS from 1 January 2008.[6]

65. With respect to forests planted between 1990 and 2006 (on land that was not in forest in 1989), the government has to date, indicated that it is likely to retain credits and liabilities. The introduction of an ETS provides an opportunity for the government to revisit its previous position. The previous position was developed in the context of the government retaining credits and liabilities elsewhere in the economy. There is a stronger rationale for devolving credits and liabilities to the forest sector for 1990-2006 forests in the context of the government devolving liabilities more widely throughout the economy through the introduction of an ETS. This context of broader devolution of liabilities is important.

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4 Items related to preparedness to enter an ETS include factors such as the readiness of sectors to monitor, report and verify their emissions.

5 Such a timetable cannot be confirmed until detailed engagement with key stakeholders as to sector preparedness has been undertaken. Having said this, it is intended to clearly signal an intent to introduce forestry from 1 January 2008 and liquid fossil fuels from 1 January 2009.

6 If forest removals on land that was in forest in 1989 occurs in the 2008-2012 period, the cost to New Zealand is significant under the Kyoto Protocol (between $10,000 - 15,000 per hectare for mature forests). In terms of forests planted on land that was not in forest in 1989, New Zealand receives the credits for carbon sequestration, but receives the liability for harvest of those trees.

66. We are proposing the owners of 1990-2006 forests be given the choice to enter the ETS and receive all of the relevant sink credits and future liabilities.[7] Doing so would place better incentives on managers to maximise carbon storage, such as by extending rotation lengths. Industry stakeholders would also see this option as fairer, and argue that it would help to improve confidence in the forest sector. We are also proposing to devolve sink credits and future liabilities to the owners of forests planted in 2007 and beyond – this is likely to be a less controversial decision.

67. There are significant costs to both the Crown and to the New Zealand economy if there are not effective controls in place from early 2008 to limit land use change on land that was in forest in 1989.

68. An intent to introduce such controls has been clearly signalled to the forest industry since October 2002 and was spelled out specifically in the consultation document on Sustainable Land Management and Climate Change that was released in December 2005. Further, a subsequent and detailed discussion document on specific design options was released in February 2006 as part of a comprehensive consultation process. Finally, the forestry sector has clearly expected such measures to take effect from 1 January 2008, as many stakeholders have moved to bring forward their forest removal activities in advance of this date.

69. In terms of allocation associated with pre 1990 forests, placing obligations on landowners of pre-1990 forests to surrender an NZU for every tonne of emissions from deforestation is likely to impact on land values. As such, assistance is justified on equity grounds (prior commitments have been made that the government retain deforestation liabilities provided these remain within a cap equal to 21 million tonnes CO_2-e in CP1 [CAB Min (02) 26/16 refers]). We recommend that the government retains deforestation liabilities equal to 21 million tonnes in CP1.

70. There is a case for including agriculture into an ETS prior to 2013. Options (albeit with weaknesses) are technically available. Our initial preference is not to include agriculture prior to 2013 noting the memorandum of understanding with the sector that was agreed in 2002. This will allow more time to work through the technical difficulties associated with including agriculture in an ETS. This would also allow more time for results from research aimed at (primarily) reducing the carbon footprint of the New Zealand agricultural sector to be incorporated into the land-use sector.

71. We do intend to have discussions with the agricultural sector as to whether opportunities exist to reduce emissions in the agricultural sector prior to 2013. This could include discussing with sector leaders a range of factors such as the timing of mandatory monitoring and reporting, levels of support for emission mitigation research and whether there are possibilities for earlier and greater uptake of nitrogen management tools.

LINKAGES TO OTHER FORESTRY POLICIES

72. There are a range of linkages between the proposed introduction of a NZ ETS and other policies. Immediate implications exist for the Permanent Forest Sink Initiative (PFSI) and the East Coast Forestry Project (ECFP). It is proposed to delegate authority to the Minister Responsible for Climate Change Issues, the Minister of Finance and the Minister of Agriculture and Forestry to approve any changes required to the PFSI and ECFP in order to align them with the NZ ETS.

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7 In no way is this an acceptance of the "property right" arguments raised by some parts of the forestry sector.

FINANCIAL IMPLICATIONS

73. There are no financial implications flowing directly from this paper. When final decisions on assistance to business are made, the financial implications may well be significant. There will be financial implications associated with possible government initiatives to ameliorate the effects of the proposed ETS on target groups of New Zealanders and on the lowering of barriers to reducing emissions (e.g. supporting the uptake of energy efficiency measures). There may also be some financial implications associated with preparing the materials for engagement around the sustainability / climate change package.

HUMAN RIGHTS

74. There are no direct human rights implications flowing from this paper.

LEGISLATIVE IMPLICATIONS

75. Establishing an Emissions Trading Scheme will require legislation. Many of the features required for any ETS are independent of the high-level policy decisions associated with sector-specific decisions about assistance and allocation.

76. Approval is sought for drafting to begin on framework legislation to implement the core elements of a NZ ETS in accordance with the design elements in this paper, and also the detail contained in the previously submitted Cabinet papers on ETS design[8] but not in this paper. In terms of the latter, delegated authority is sought from Cabinet to allow drafting instructions to be issued.

77. This paper proposes that the forest sector enters a NZ ETS as at 1 January 2008 and liquid fossil fuels from 1 January 2009. Advice on detailed design of the forestry elements of a NZ ETS is being prepared for consideration by the Minister of Forestry, Minister Responsible for Climate Change Issues and Ministry of Finance. Delegated authority is also sought from Cabinet to allow drafting instructions to be issued to allow forestry to enter the ETS from 1 January 2008.

78. Bringing the forestry sector into the ETS from 1 January 2008 means that certain provisions of the legislation covering forestry will need to have a retrospective effect as the legislation will not be passed by that date.

79. It is recommended that the legislation proceed as a new part of the Climate Change Response Act 2002 (CCRA). The CCRA enables New Zealand to meet its Kyoto Protocol obligations, including through the establishment of a national registry to record the holdings of emissions units. Many of the features for a NZ ETS already exist under the CCRA, although some will require modification.

REGULATORY IMPACT ANALYSIS

80. A Regulatory Impact Statement (RIS) has been prepared and is attached to this paper. The Regulatory Impact Analysis Unit considers the analysis and the RIS to be adequate. The Emissions Trading Group confirms that the principles of the Code of Good Regulatory Practice and the regulatory impact analysis requirements, including the consultation RIS requirements, have been complied with. The final RIS was circulated in conjunction with this Cabinet paper for departmental consultation.

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8 The Rationale for an Emissions Trading Scheme, Design of a Possible New Zealand Emissions Trading Scheme: Core Elements, A Possible New Zealand Emissions Trading Scheme: Timing and Assistance and The Approach and Process for Engaging on a Possible NZ ETS.

81. It should be noted that attached RIS is a work-in-progress, reflecting the in-principle nature of decisions. As such, it contains more detail than would usually be the case in order to cover key points of the debate and facilitate discussion. The RIS(s) that will accompany the Cabinet papers containing final recommendations will be a higher-level summary.

GENDER IMPLICATIONS AND DISABILITY PERSPECTIVE

82. None.

PUBLICITY

83. We recommend a Climate Change Leadership Group be established to facilitate communication between the government and broader community as policy decisions are taken on the proposed design of an ETS and related climate change initiatives. The Group will provide a means for perspectives to be exchanged on sustainability, climate change and the opportunities for New Zealand Inc. It will enable ongoing community input more directly into Ministerial decision-making, and for the government to communicate policy decisions directly to senior community leaders on a confidential basis. Refer to Annex 1 for the Climate Change Leadership Group Terms of Reference. We recommend this Group be established, for announcement, in the week beginning 3 September. The Group should continue to operate at least until initial ETS legislation has been introduced into the House, and meet on a monthly basis. We recommend you delegate responsibility for establishing the Climate Change Leadership Group to the Ministers of Finance and the Minister Responsible for Climate Change Issues.

84. We are preparing to release three engagement documents. The first is an overarching statement on climate change and sustainability entitled: Sustainable New Zealand – our actions on climate change. The second is the proposed ETS Framework document and the third is a technical document on forestry. All documents will be released in the week beginning 17 September. Key media opinion leaders would also be briefed. A sustainability.govt.nz website will act as a portal for the announcement and all subsequent initiatives falling under the sustainability umbrella.

85. The material will be released in the same week, most likely by Ministers Cullen and Parker. Other Ministers are likely to be involved, particularly in sector specific elements of the ETS. The communication and engagement process, as detailed in a previous paper and comprising public briefings, one-on-one meetings with key stakeholders, cross-sectoral workshops, and hui, will then commence.

86. Other sustainability initiatives (NZES, Sustainable Land Management Action Plan, NZEECS, and a discussion paper on the New Zealand Transport Strategy) will be announced shortly. The proposed timeline is as follows:

- Week of 3 September:
    - Announcement of business/stakeholder group
    - Three engagements documents to be approved by CBC (under power to act)
- Week of 10 September: briefings for senior media opinion leaders
- Week of 17 September: engagement documents.
- 24 September-November: engagement on ETS (and other sustainability initiatives as announced)

87. The Department of Prime Minister and Cabinet, with MfE, Tsy (including ETG), MAF, MED, MoT and other appropriate agencies will coordinate the climate change communications including appropriate integration of sustainability, NZES, NZEECS, sustainable land management plan of action etc leading up to and during the engagement process.

88. It should be noted that the proposed timing of including sectors within the ETS means that engagement material needs to be promulgated to stakeholders as soon as possible. Given this time constraint, it will not be possible to use the Government Electronic Tendering Service (GETS) for contracted communications work during the initial stages of the communications process. Officials will ensure that any significant subsequent pieces of work (should they arise) will be able to go through the GETS process. Discussions are underway with the Office of the Auditor-General on the above.

89. We recommend that this paper be publicly released, subject to any necessary withholdings under the Official Information Act 1982.

CONSULTATION

90. The Department of Conservation, the Energy Efficiency and Conservation Authority, the Ministry of Agriculture and Forestry, the Ministry of Economic Development, the Ministry for the Environment, the Ministry of Foreign Affairs and Trade, the Ministry of Research, Science and Technology, the Ministry of Social Development, the Ministry of Transport, Te Puni Kokiri and the Treasury were consulted on previous Cabinet papers that contained much of this material. The Department of the Prime Minister and Cabinet was also consulted.

Recommendations

It is recommended that the Cabinet:

1. **note** that it is intended to contextualise climate change initiatives in general, and the proposed introduction of a NZ ETS in particular, in a sustainability and economic transformation setting;
2. **note** the aim is to focus stakeholder and the public's minds on:

    - Climate change is real and we must do our bit to help the world deal with it. This means we need to reduce our emissions.
    - Addressing climate change is also central to the government's economic transformation agenda. This agenda seeks to improve productivity, and increase the value of our exports, while advancing long term environmental sustainability. Improved efficiency in the use of energy and natural resources is central to this.
    - There are economic opportunities for lower carbon products and services. Sectors such as tourism and viticulture are already planning and investing based on sustainability. Agriculture is also starting to respond. Significant opportunities will also arise for new products and services.
    - New Zealand's clean green image is part of the international brand which underpins the premium prices we seek for our products and services. This must be supported by appropriate policies to tackle the environmental challenges we face. Failure to appropriately control greenhouse gas emissions would have trade risks, in addition to serious environmental and political consequences that unmitigated climate change would bring.

- Many of the things we do in the name of climate change achieve other commonsense objectives. Warm, energy efficient homes are healthy homes. Fuel and energy efficiency saves money. Forestry reduces erosion and improves water quality.

- Emission trading is both an affordable and sensible approach to reduce emissions. NZ is one of a number of countries such as the UK, Australia and US States developing such schemes. Economic modelling shows the impact on growth is minimal.

- The government will assist households and businesses to adapt and provide a smooth and gradual transition. The high proportion of renewable electricity sources has New Zealand well positioned to make this transition

3. **note** that a companion paper identifying possible government initiatives to ameliorate the effects of the proposed ETS on targeted groups of New Zealanders and lower barriers to reducing emissions, as well as sources of revenues to fund such initiatives, is being prepared;

4. **note** that this paper seeks "in-principle agreement" for the core elements of the NZ ETS, subject to stakeholder and Maori engagement and a further Cabinet paper seeking final Cabinet agreement to each elements of the scheme;

ETS Objective and Key Design Features

5. **agree-in-principle**, subject to paragraph 4, that New Zealand implement a cap-and-trade emissions trading scheme as part of our climate change response;

6. **agree-in-principle**, subject to paragraph 4, that the revised and reformatted objective of the NZ ETS is:

   "That a New Zealand ETS support and encourage global efforts to reduce greenhouse gas emissions by:

   - *Reducing New Zealand's net emissions below business-as-usual levels; and*

   - *Complying with our international obligations, including our Kyoto Protocol obligations;*

   while maintaining economic flexibility, equity, and environmental integrity at least cost in the long term".

7. **agree-in-principle**, subject to paragraph 4, to include all sectors and all gases (subject to de minimus considerations);

8. **agree in principle**, subject to paragraph 4, that a NZ ETS be internationally linked;

9. **agree-in-principle**, subject to paragraph 4, that the core obligation under a NZ ETS be an absolute obligation as opposed to an intensity-based obligation

10. **agree-in-principle**, subject to paragraph 4, to obligations being placed "upstream" in the supply chain

11. **agree-in-principle**, subject to paragraph 4, the following general approach to allocation:

    i. attempt to maintain broad equity of treatment between and within sectors;

    ii. seek to avoid long term regrets in designing and implementing short run policies;

    iii. make the transition more manageable by being relatively generous in the first commitment period (CP1) which covers the period 2008-2012;

    iv. do not provide assistance to firms whose profits will be largely unaffected by the introduction of an ETS;

    v. favour assistance via gifting units ('free allocation') as opposed to a progressive obligation, but to leave open the possibility of using a progressive obligation in some sectors; and

    vi. move to zero assistance over time for overall economic efficiency, equity and administrative reasons.

12. **agree-in-principle**, subject to paragraph 4, to include all sectors and all gases within a NZ ETS by 1 January 2013 with sectoral timing of entry into a NZ ETS being as follows:

    i. forestry 1 January 2008;

    ii. liquid fossil fuels 1 January 2009;

    iii. stationary energy and industrial processes 1 January 2010;

    iv. agriculture 1 January 2013; and

    v. waste 1 January 2013.

13. **note** that although all of these dates of entry are subject to engagement with stakeholders, we intend to indicate that we are relatively firm on the date of introduction for both forestry and liquid fossil fuels;

Process going Forward and Detailed Decision-Making

14. **note** the proposed timing of including sectors within the ETS as set out in recommendation 12 means that engagement material needs to be promulgated to stakeholders as soon as possible;

15. **note** that four Cabinet papers *The Rationale for an Emissions Trading Scheme*, *Design of a Possible New Zealand Emissions Trading Scheme: Core Elements, A Possible New Zealand Emissions Trading Scheme: Timing and Assistance* and *The Approach and Process for Engaging on a Possible NZ ETS* on more detailed ETS design were considered by Cabinet's Business Committee;

16. **note** that a paper on the detailed design of the forestry elements of a NZ ETS is being prepared for consideration by the Minister of Forestry, Minister Responsible for Climate Change Issues and Ministry of Finance;

17. **delegate** authority to Minister Responsible for Climate Change Issues, the Minister of Finance and Minister of Agriculture and Forestry to direct officials to prepare publicity material, and to prepare drafting instructions, building on the detail in those papers outlined in recommendations 14 and 16;

18. **direct** officials, given the instructions implied above, to prepare for consideration by Cabinet's Business Committee (having sought Power to Act) on 3 September 2007:

    i. A document outlining the context of climate change within the broader sustainability and economic transformation agendas;

    ii. A detailed engagement documentation outlining the proposed NZ ETS;

    iii. A companion engagement paper on the forest sector aspects of an ETS; and

    iv. A draft Cabinet paper for identifying possible government initiatives to ameliorate the effects of an ETS on targeted groups of New Zealanders and reduce barriers to lessen emissions (e.g. support for energy efficiency measures), as well as sources of revenues to fund such initiatives, which takes account of discussion at the CBC meeting on 15 August 2007 on recommendation 71 of the paper POL (07) 257: *Design of a Possible New Zealand Emissions Trading Scheme: Core Elements;*

19. **invite** the Minister Responsible for Climate Change Issues to issue drafting instructions to the Parliamentary Counsel Office for legislation to implement the NZ ETS in accordance with the directions provided by the three Ministers above in recommendation 17;

20. **note** that a phased engagement process with stakeholders and Maori is planned in which some specifics will be proposed but many decisions (and in particular, many sector-specific features) are left open to engagement;

21. **note** that the indicative timetable outlined above should not preclude actions being taken prior to 1 January 2013 to reduce emissions in the agricultural and horticultural sectors;

22. **agree** to establish a Climate Change Leadership Group to facilitate discussions between the government and the broader community on sustainability and climate change policy, including the proposed New Zealand Emissions Trading Scheme;

23. **agree** to the Climate Change Leadership Group Terms of Reference (Annex 1);

24. **agree** to delegate responsibility for establishing the Climate Change Leadership Group, including agreeing its membership, to the Minister of Finance and the Minister Responsible for Climate Change Issues in consultation with other Ministers as appropriate;

25. **note** that a number of other sustainability initiatives will be announced during October and November, including the final New Zealand Energy Strategy and New Zealand Energy Efficiency and Conservation Strategy, Final Sustainable Land Management Action Plan and a discussion paper on Implementing the New Zealand Transport Strategy;

26. **direct** the Department of Prime Minister and Cabinet with MfE, Treasury (including ETG), MAF, MED, MoT and other appropriate agencies to coordinate the sustainability and climate change communications including appropriate integration of sustainability initiatives such as the New Zealand Energy Strategy, New Zealand Energy Efficiency and Conservation Strategy, Sustainable Land Management Plan of Action and Implementing the New Zealand Transport Strategy leading up to and during the engagement process;

27. **note** that given time constraints it will not be possible to use the Government Electronic Tendering Service (GETS) for contracted communications work during the initial stages of the communications process outlined in recommendation 26;

28. **direct** officials to organise any contracted communications work arising from recommendation 26 so as to ensure significant pieces of work (should any arise) will be able to go through the GETS process;

29. **note** that the Department of Prime Minister and Cabinet is in discussions with the Office of the Auditor-General on the above;

30. **direct** officials to report back to POL on what additional funding will be required from the Climate Change contingency to undertake the coordination and communications role set out in recommendation 26;

31. **note** that linkages exist between the NZ ETS and the Permanent Forest Sink Initiative (PFSI) and the East Coast Forestry Project (ECFP) and that changes to these initiatives will be necessary following consultation and to align them with the ETS;

32. **delegate** authority to the Minister Responsible for Climate Change Issues, the Minister of Finance and the Minister of Agriculture and Forestry to approve any changes required to the PFSI and ECFP in order to align them with the NZ ETS.

Hon Dr Michael Cullen
Minister of Finance

Date 21/8/7

Hon David Parker
Minister Responsible for
Climate Change Issues

Date 21/8/7

ANNEX 1

Climate Change Leadership Group: Terms of Reference

Purpose

1. The purpose of the Climate Change Leadership Group is to facilitate communication between the government and the broader community as policy decisions are taken on the proposed design of a New Zealand greenhouse gas Emissions Trading Scheme (ETS). The Group will provide a means for:

    - Exchange of perspectives on sustainability, climate change and opportunities for New Zealand Inc.
    - Business and other sectors to input their perspectives more directly into Minister's decision-making.
    - Government to communicate policy decisions directly to a group of senior business leaders on a confidential basis.

2. It is expected that the Group would operate at least until legislation covering the design and introduction of an ETS has been introduced into the House (most likely December 2007).

Functions

3. The Group will:

    - Provide perspectives to the government and Ministers of Finance and Climate Change on any policy issue related to climate change and emissions trading.
    - Provide advice on communicating proposals developed by government and industry with the wider community.
    - Facilitate discussions with broader groups in the community.

Membership

4. The Group will consist of the Secretary to the Treasury, the Chief Executives of the Ministries for the Environment, Agriculture and Forestry and Economic Development and eight to ten private sector representatives.

5. The private sector representatives will be drawn from the different areas of the broader community. Members would be expected to hold senior positions within their organisations, typically Chief Executive or Board level, who felt able to express the views of the broader community in addition to those of their own organisations.

6. In order to ensure comprehensive coverage of the range of interests within the broader community, the government will seek to include at least one private sector participant from each of the agriculture, electricity, forestry and industrial sectors.

7. Participant will also cover the science, environmental and local government sectors. At least one Māori representative will be included.

Relationship to the Growth and Innovation Board

8. The Growth and Innovation Advisory Board (GIAB) plays a key role in progressing the government's growth and innovation policy framework. Given the connections between New Zealand Inc, sustainability and climate change, the Climate Change Leadership Group may meet to discuss these issues with GIAB.

Accountability and Reporting

9. The Group will report directly to the Ministers of Finance and Climate Change through:
   - Monthly face-to-face meetings.
   - Written reports as agreed.

Means

10. Information – The Group will have access to appropriate written material, provided in confidence.

11. Analysis – The Group will be able to draw on the assistance of other members of their organisations, or third party experts, in developing and preparing their perspectives.

Protocols

12. The Group will not publish the advice it gives to the government. However, the government may, from time to time, agree to publish advice provided by the Group.

13. Members will be required to commit to keep confidential any written or oral information they have received in their role as Group participants unless authorised to release information by Ministers.

Regulatory Impact Statement

A Proposed New Zealand Emissions Trading Scheme

EXECUTIVE SUMMARY

Human induced climate change is a real and serious phenomenon that the world must take action to address.

New Zealand has decided to be part of international action to reduce the risk of adverse outcomes from climate change. Reducing the global level of Greenhouse Gas (GHG) emissions will be a key part of this action.

New Zealand has ratified the Kyoto Protocol. Under Kyoto, the New Zealand government is liable for New Zealand's GHG emissions above 1990 levels over the period 2008-2012. New Zealand has consistently stated that it is prepared to take on commitments to address climate change beyond 2012 in the context of the broadest international agreement to do so.

Action to address climate change and to meet ongoing international obligations will incur economic costs and benefits. The government has a range of tools available to meet these challenges - some mechanisms will be significantly less costly and disruptive to the New Zealand economy then others.

New Zealand wants its future net emissions to be below business-as-usual levels and to meet its international obligations in a least cost manner over the long term.

A cap and trade emissions trading scheme (ETS) with a transitional introductory phase is the preferred broad economic mechanism to assist in meeting these goals, subject to further engagement with stakeholders, and with Māori as Treaty partners.

The proposed transition period will differ by sector depending on their readiness and other factors. The main impact would be that the price of emissions would be reflected in prices throughout the economy. For example, assuming a price of emissions of $15/tonne CO_2-e, retail electricity prices would likely rise by around 5% and petrol would likely rise by around 2.5%. The government is working on an assistance package for firms and households to help manage some of these potential impacts.

The government now proposes engagement with stakeholders and Māori on the details of an ETS before making final decisions this year on whether to proceed with a scheme or not.

ADEQUACY STATEMENT

The Regulatory Impact Analysis Unit has reviewed the RIS and considers the RIS is adequate according to the adequacy criteria.

STATUS QUO AND PROBLEM STATEMENT

Underlying Problem

1. Human induced climate change is a real and serious phenomenon that the world must take action to address. There is now very high confidence that greenhouse gas emissions (GHGs) have caused the atmosphere to warm.[1] Continued emissions will cause further warming, which in turn will have a range of impacts on natural and human systems.[2]

2. Avoiding the worst impacts of climate change will require substantial reductions in global levels of GHG emissions.

3. New Zealand, whose emissions comprise a very small proportion of the global total, is reliant on effective international action to reduce total GHG emissions, and thereby reduce the extent of future climate change. This is not an argument for New Zealand to avoid making efforts to reduce its emissions, and leaving the rest of the world to take the necessary action. As a strong supporter of the principle of collective responsibility for action to manage global problems, and based on the need to protect our own economic activity base and our natural environment, New Zealand needs to play its part in addressing climate change.

4. A failure to act sustainably and responsibly could reduce New Zealand's international credibility and influence in international forums. In addition, any perception internationally that New Zealand was not acting with environmental integrity could harm overseas consumers' perceptions of the desirability of our exports, and the desirability of New Zealand as a tourism destination.

Status Quo

5. New Zealand is party to the United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol.

6. The major feature of the Kyoto Protocol is that it sets mandatory targets on GHG emissions for the developed countries and economies in transition listed in Annex 1 to the UNFCCC[3]. In New Zealand's case, our commitment is to take responsibility for emissions above 1990 levels during the period 2008-2012. New Zealand has consistently stated that it is prepared to undertake commitments to address climate change beyond 2012 in the context of the broadest international agreement to do so.

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1 IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. (see p3) Pre-publication version available at: http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Pub_SPM-v2.pdf

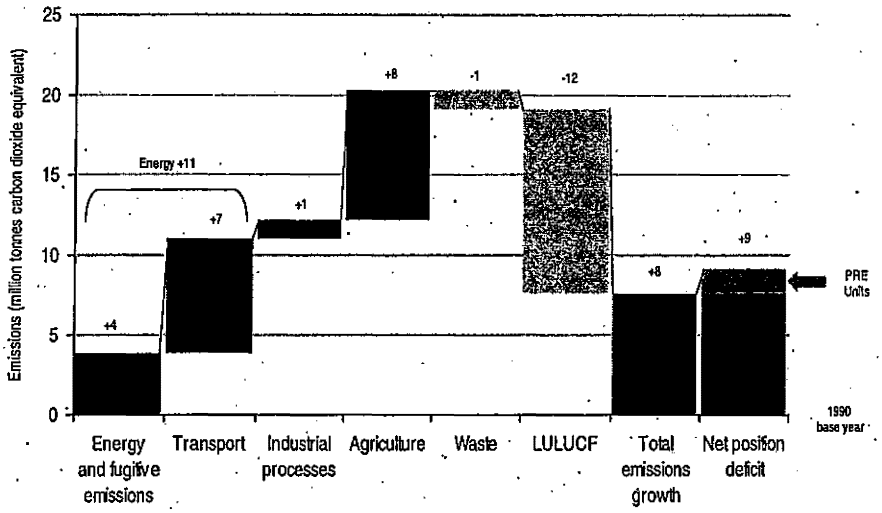
2 IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Pre-publication version available at: http://www.ipcc.ch/SPM13apr07.pdf

3 The Kyoto Protocol aims to reduce the emissions of Annex 1 countries by five percent compared to 1990 levels. While each Annex 1 country has country-specific targets for emissions reductions (New Zealand's is the 1990 level), the agreement offers flexibility in how countries may meet their targets. For example, they may partially compensate for their emissions by increasing "sinks" -- forests, which remove carbon dioxide from the atmosphere. Countries may meet their targets by activities on their own territories or in other countries. Or they may pay for foreign projects that result in greenhouse-gas cuts. Several mechanisms have been set up for this purpose. Not all countries listed in Annex 1 to the UNFCCC have become party to the Kyoto Protocol, notably Australia and the United States.

7. Greenhouse gas emissions (excluding emissions from deforestation) in New Zealand are projected to grow to around 30% above 1990 levels by 2010. Figure 1 below shows the contributions of different sectors to the level of GHG emissions in New Zealand since 1990[4].

Figure 1: Agriculture and transport emissions are projected to grow most quickly between 1990 and 2010

Source: New Zealand Ministry for the Environment

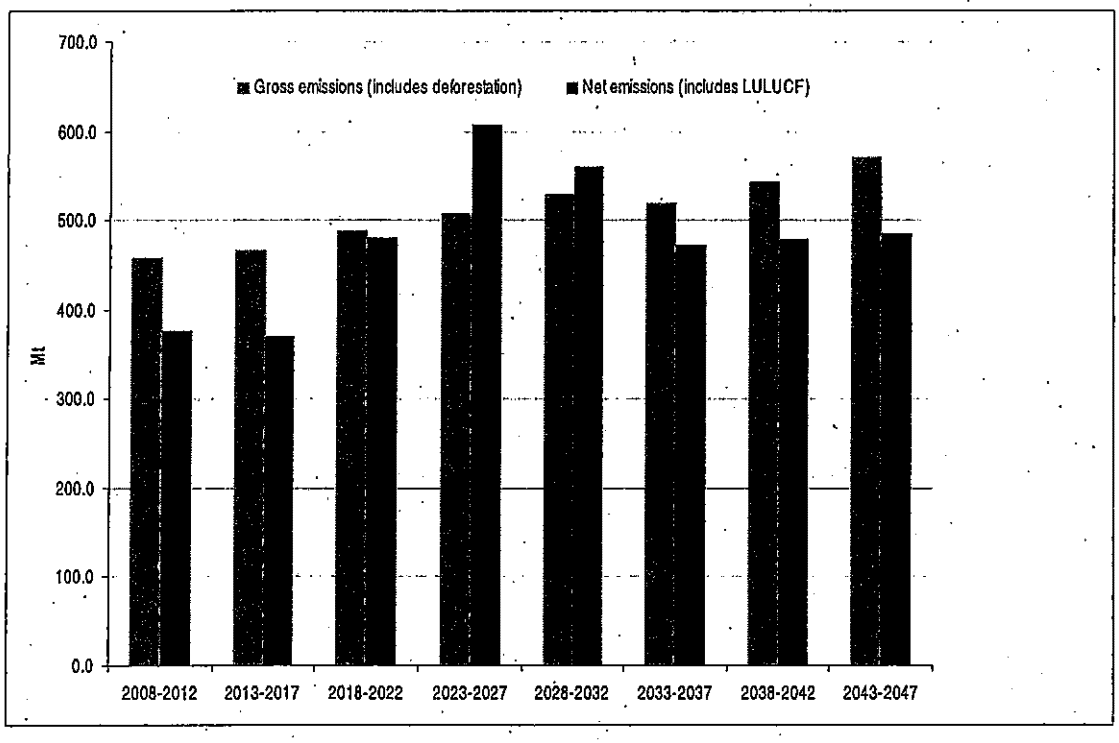


8. The government has yet to introduce an economy-wide mechanism to reduce GHG emissions. However, the government has undertaken specific policy interventions on selected sectors. These have been funded either directly from government (hence general taxpayers) e.g. solar water heating, or through compliance costs of the regulation/legislation e.g. building standards, biodiesel sales obligation. The emissions reduction expected from these measures is relatively small, and based on current projections, business-as-usual emissions levels in New Zealand are expected to continue to grow strongly.

4 The figure compares emissions in 1990 with mid-point projections for the 2008-2012 period.

Figure 2: Emissions grow strongly in the absence of further policy measures

Source: Ministry for the Environment, based on data from contributing agencies. Projections based on policy settings as at April 2007.



9. New Zealand's emissions profile has two major elements. Firstly, there is an underlying emissions path (crudely this is the sum of agricultural, transport, and non-transport energy emissions). This underlying emissions path projection rises steadily at approximately 1% per year in the period through to 2045. Secondly, it has a forest sink trend running through it; as the forests planted in the 1990s are due to be harvested (through the mid to late 2020s to mid 2030s), New Zealand's overall emissions (including forest sinks) spike significantly. It is estimated that under the business-as-usual model, New Zealand's net emissions in 2023-2027 will be over 60% higher than in commitment period one (CP1) of the Kyoto Protocol (2008-2012).

10. The status quo (business as usual) is not a sensible option. It would leave the government to fund emissions above 1990 levels by purchasing units on the international market through general taxation. Firms would have little incentive to reduce emissions as they would not be directly incurring the costs of their emissions. Thus, emissions would continue to rise and thus become increasingly costly for government (i.e. taxpayers), especially as the international agreements are expected to become more stringent. There would be no way of identifying least cost emissions reductions, and no way of determining the appropriate levels of domestic versus international abatement.

Costs and Benefits of Climate Change Mitigation

11. There is a significant body of work internationally describing the range of costs and benefits of climate change mitigation and the cost of global action.

12. Action to address climate change is likely to incur real economic costs. Working Group III of the Intergovernmental Panel on Climate Change (IPCC)[5] has concluded that in 2030, the macro-economic costs for multi-gas mitigation, consistent with emissions trajectories towards stabilization between 445 and 710 ppm CO_2-eq, are estimated at between a 3% decrease of global GDP and a small increase, compared with the level of GDP that would have occurred under a business-as-usual scenario (note that with projected rates of GDP growth, levels of GDP per head will be significantly greater than they are today, even with these estimated reductions).

13. The question, therefore, is whether the costs of action are justified by the benefits.

14. It is inevitable that any discussion of the economics of climate change will refer to the *Stern Review,* a major review of the subject commissioned by the UK Government and undertaken by a team from Her Majesty's Treasury under the direction of Sir Nicholas Stern[6].

15. The Stern Review concluded that not only were "strong and deliberate" policy actions required to reduce emissions, but that they were justified.

16. The publication of the Stern Review has promoted the fast-growth of literature discussing, in both technical and non-technical terms, both the Stern Review's conclusions and methods.[7] These comments have, in turn, prompted Sir Nicholas and his colleagues to reply.[8]

17. Much of the initial analysis of the Stern Review, at least in the economic literature, focused on the technical aspects of Chapter 6 of the Stern Review, which addresses the modeling of climate change impacts. Of particular concern to some highly distinguished economists[9] is the use by Stern of very low discount rates[10].

18. Discounting is important in analysing climate change because climate change is a very long-term issue: Actions today will have impacts many years, if not centuries, into the future. In the Stern Review, one of the key issues was whether the costs of early actions to reduce emissions were warranted, given that the benefits (in terms of harm avoided) will only accrue to future generations.

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5 IPCC, 2007. *Climate change 2007: Mitigation. Contribution of Working group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [B. Metz, O. R. Davidson, P.R. Bosch, R. Dave, L. A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. p 16. Pre-publication version available at: http://www.ipcc.ch/SPM040507.pdf

6 Nicholas Stern *The Economics of Climate Change; The Stern Review*, Cabinet Office and HM Treasury, available at: http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm

7 A sample of the comments includes :Weitzman (2007), Maddison, (2007), Yohe (2007), Tol (2006) , Dasgupta (2006), Nordhaus (2006), Cole (2007), Byatt et al (2006), Tol and Yohe (2006), Tol and Yohe (2007), Varian (2006), Yohe (2006) and Yohe and Tol (2007)

8 See Simon Dietz, Chris Hope, Nicholas Stern & Dimitri Zenghelis Reflections on the Stern Review (1) A Robust Case for Strong Action to Reduce the Risks of Climate Change, *World Economics, Vol. 8, No. 1, January–March 2007, pp 121 – 168 and* Lorraine Hamid, Nicholas Stern & Chris Taylor Reflections on the Stern Review (2) A Growing International Opportunity to Move Strongly on Climate Change, , *World Economics, Vol. 8, No. 1, January–March 2007, pp 1 – 18*

9 Dasgupta (2006) and Nordhaus (2006)

10 "Shots across the Stern", *The Economist*, Dec 13th 2006

19. Stern's critics are concerned that the use of low discount rates has unjustifiably biased the analysis in favour of early and significant action. These criticisms focus on one part of the Stern Review, Chapter 6, at the expense of considering the wide range of analysis and data presented in the Stern Review. As Professor Martin Weitzman, writing for the *Journal of Economic Literature*, stated:

> *... spending money now to slow global warming should not be conceptualized primarily as being about optimal consumption smoothing so much as an issue about how much insurance to buy to offset the small chance of a ruinous catastrophe that is difficult to compensate by ordinary savings. While I am (along with most other economist-critics) sceptical of Stern's formal analysis, I believe that the Review's informal emphasis on climate-change uncertainty can be recast into sound analytical arguments that might justify some of its conclusions.*[11]

20. At a general level, it is now acknowledged that there is a strong case for addressing climate change. One of the pre-eminent scholars of the economics of climate change, Professor William Nordhaus of Yale University, recently said:

> *Global warming is a serious problem that will not solve itself. Countries should take co-operative steps to slow global warming. There is no case for delay. The most fruitful and effective approach is for countries to put harmonized price, perhaps a steep price, on greenhouse gas emissions, primarily those of carbon dioxide resulting from the combustion of fossils fuels. While other measures might usefully buttress this policy, placing a near-universal and harmonized price or tax on carbon is a necessary, and perhaps a sufficient condition, for reducing the future threat of global warming.*[12]

21. The economic case for emissions pricing does not turn on Stern's discount rates or on Nordhaus's views, rather, it needs to proceed on the basis of conventional analysis of public policy alternatives within the context of what the New Zealand government is trying to achieve.

22. In deciding whether to reduce GHG emissions in New Zealand the appropriate question is not solely whether it can be demonstrated that climate change will harm New Zealand and whether the damage to New Zealand averted by the reduction exceeds the costs it would impose. This question does not recognise that New Zealand is a participant in the international climate change policy process and has ratified the Kyoto Protocol. New Zealand has assumed specific obligations under that Protocol and has consistently stated that it is prepared to undertake commitments beyond 2012 in the context of the broadest international agreement to do so. Public policies (such as an emissions trading scheme) are instruments for managing these obligations. Under international agreements, harm is not directly defined in environmental terms, but in terms of the cost to New Zealand of meeting these international commitments.[13]

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11 Martin L. Weitzman "The Stern Review of the Economics of Climate Change", *Journal of Economic Literature*, forthcoming. Available at http://www.economics.harvard.edu/faculty/Weitzman/papers/JELSternReport.pdf

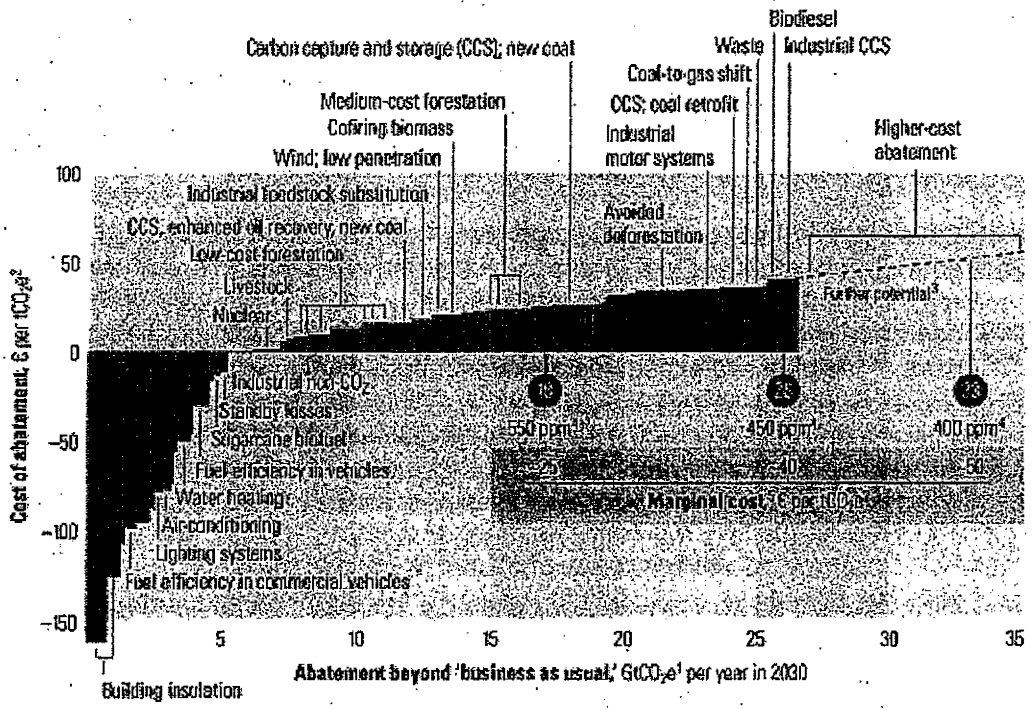
12 William Nordhaus '*The Challenge of Global Warming: Economic Models and Environmental Policy*', *2007, p15.* Available at http://nordhaus.econ.yale.edu/dice_mss_072407_all.pdf . Accessed on 23 July

13 A similar point regarding carbon taxes was made by the Tax Review 2001 in its *Final Report*, October 2001, p 116.

23. International studies[14] have estimated the global potential for climate change mitigation. These studies suggest that there is a significant potential for mitigation, some of which have "negative cost" (i.e. the savings in energy costs outweigh the costs of the investment). Although some of the activities in these studies are not relevant to New Zealand, it is likely that the general conclusions that there are a range of abatement activities would apply. Even if these studies are not directly relevant to New Zealand, they show that there are abatement activities available around the globe which, through linking to the international market, will help to limit the cost of emissions in New Zealand.

24. The figure below is the cost curve produced by the McKinsey study.

Global cost curve for greenhouse gas abatement measures beyond 'business as usual'; greenhouse gases measured in $GtCO_2e$[1]



[1] $GtCO_2e$ = gigaton of carbon dioxide equivalent; "business as usual" based on emissions growth driven mainly by increasing demand for energy and transport around the world and by tropical deforestation.
[2] tCO_2e = ton of carbon dioxide equivalent.
[3] Measures costing more than €50 a ton were not the focus of this study.
[4] Atmospheric concentration of all greenhouse gases recalculated into CO_2 equivalents; ppm = parts per million.
[5] Marginal cost of avoiding emissions of 1 ton of CO_2 equivalents in each abatement demand scenario.

14 IPCC, 2007. Climate change 2007: Mitigation. Contribution of Working group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [B. Metz, O. R. Davidson, P.R. Bosch, R. Dave, L. A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. (See in particular Chapter 11); Leif Gustavsson and Reinhard Madlener, "CO2 mitigation costs of large-scale bioenergy technologies in competitive electricity markets", *Energy*, Volume 28, Issue 14, November 2003, Pages 1405-1425; Per-Anders Enkvist, Tomas Nauclér, and Jerker Rosander, "A cost curve for greenhouse gas reduction", McKinsey Quarterly, 2007 Number 1.

Objectives

25. Specific climate change initiatives sit within New Zealand's broader sustainability and climate change goals and objectives. The government's guiding principles for its climate change policies are that they:

- Are long term and strategic;
- Balance durable efforts to reduce emissions with preparations for the impacts of a more variable climate;
- Engage with the wider public, industry and business to inspire their willing, effective and long-term involvement; and
- Focus on international engagement that advances New Zealand's national interests.

26. The government's current policy development process is underpinned by some key assumptions that are consistent with the approach it has taken to climate change over the past few years. These include (inter-alia):

- Faced with sufficient consensus on climate change science, responsible government must act to address the risks for New Zealand's vulnerable environment, economy and way of life. While action to reduce greenhouse gas emissions over the long term will have a cost, the predicted costs and risks of inaction are expected to be unacceptably high;
- Effective international action is needed to reduce global greenhouse gas emissions. To support and encourage international action, New Zealand needs to play its part in reducing emissions, as well as encouraging other countries, especially the major emitters, to act;
- New Zealand's response should maximise the economic advantages of using energy and resources more efficiently. New, and newly economic, technologies will play a crucial role. Policy should facilitate New Zealand involvement in the development or adaptation of low emissions technologies relevant to our needs;
- Our policy response should start with the most achievable options and seek least-cost solutions. A combination of sectoral and economy-wide measures, including voluntary, price-based and regulatory measures, is likely to be needed. Short-term measures must not be inconsistent with likely long-term solutions and should at the very least curb increases in emissions;
- All sectors of the economy should play a fair and equitable part in the national response to climate change, reflecting the fact that some sectors will be able to achieve emissions reductions more easily than others. An important policy consideration is the competitiveness of sectors in which there are no low emissions technologies available at moderate cost.

27. Key in a decision to implement specific climate change initiatives is an assessment that New Zealand will continue to operate in a carbon-constrained world. Given New Zealand's rising long-term emissions profile, developing the appropriate combination of policies outlined in the fourth bullet point above will be imperative.

28. These principles and assumptions (outlined above) have been synthesised to provide a more detailed objective to frame policy development in this area as follows:

> *to develop climate change initiatives that support and encourage global efforts to reduce greenhouse gas emissions by:*
>
> - *reducing New Zealand's net emissions below business-as-usual levels;*
> - *complying with our international obligations, including our Kyoto Protocol obligations;*
>
> *while maintaining economic flexibility, equity, and environmental integrity at least cost in the long term.*

Alternative options

29. There are a number of possible policy approaches to reducing emissions including: direct regulation; information, promotion and voluntary initiatives; government funding of emission reduction incentives; taxes; and trading mechanisms. All of these policies will have different strengths and weaknesses.

30. The main options are to impose a series of targeted direct regulations that seek to reduce emissions in specific sectors or use regulation to introduce broad based price-based measures like a tax or an emissions trading regime. These options are not necessarily mutually exclusive.

Direct Regulation

31. There are many different sorts of regulation the government could impose to limit emissions, including:

- Imposing a mandatory standard on the energy use of appliances or controlling the vehicles entering the fleet so that, on average, vehicles are imported with improved fuel economy;
- Requiring a certain proportion of liquid fuels to be biofuels;
- Prohibiting certain activities, like the use of certain fuels in certain circumstances or limit the circumstance in which consent can be granted for conducting industrial processes that involve emissions of GHGs;
- Imposing restrictions on certain activities, for example requiring all new electricity generation to be from renewable sources.

32. Some of these, such as regulating for the introduction of biofuels, are already being implemented. Others have either been discounted or are still being considered. While direct regulatory options can produce emission reductions it is also likely that some of these reductions would come at relatively high cost. There is also the risk that some of the regulatory options could create perverse incentives.

33. Overall, the regulatory options alone will not optimise New Zealand's climate change response. Regulation will continue to be used for energy use and other activities that result in emissions for other public policy reasons, and as part of its climate change policies.

Information and Promotion

34. Schemes that give consumers and businesses better information about the GHG emissions that their actions lead to, and encourage them to change their behaviour, can be effective in some areas. New Zealand already has a number of such initiatives in place. Key examples include the energy efficiency labeling and promotional activities undertaken by the Energy Efficiency and Conservation Authority (EECA).

35. However, international evidence clearly suggests that such schemes are not likely, on their own, to be sufficient to achieve the level of emission reductions needed for New Zealand to meet its international obligations.

Emission Reduction Incentives

36. In theory, it should be possible to achieve emission reductions by incentivising the reduction of emissions, rather than 'penalising' emissions through a tax or emissions trading scheme. In practice, however, the incentive option is problematic as in order to calculate the level of incentive to pay a particular firm, it is necessary for the government to estimate the level of emissions that the firm would have emitted in the absence of the incentive. Because of the practical difficulties inherent in establishing this emissions baseline, widespread use of an incentive approach is not likely to be effective.

37. However, incentives can still be effective in certain key areas, such as the provision of subsidies for household insulation and solar heating.

Broad Based Carbon Tax

38. A broad price-based mechanism such as a carbon tax, results in the price of emission being reflected throughout the economy. Although the government can control the overall stringency, decisions on which abatement activities occur are made at the firm and consumer level. In general, firms and consumers are better placed to make these decisions than central government.

39. Under a tax, the government sets the price of emissions, and market participants determine the quantity of emissions. Taxes have the effect of reducing emissions because of the basic economic principle that the higher the price of a good, the less the demand.

40. The effectiveness of taxes in reducing emissions is dependent on the sensitivity of consumers and firms to prices. If consumers and firms are not very sensitive to prices (in economic jargon, if demand is "inelastic"), then a large increase in price is required to induce even a small reduction in emissions.

41. While it is possible to estimate the degree of price responsiveness, this can change over time and are themselves influenced by many other factors (for example, an increase in incomes can influence price elasticity).

42. It is also the case that price responsiveness can involve time-lags. In general, in the short-run, demand is less responsive to prices than in the long-run. The reason for this is that it takes time for people to adjust their behaviour (e.g. save for a more fuel-efficient car).

Tax vs Emissions Trading

43. The key difference between a carbon tax and an emission trading scheme (ETS), is that with a tax, the government sets the price of emissions, while with an ETS they set the quantity of emissions. In a theoretical world where the government knew exactly how firms' emissions would respond to changes in the price of emissions, the two approaches would lead to identical outcomes. The government could stipulate the overall level of emissions it wants to occur through the introduction of a (closed) ETS, or set a carbon tax at the level that it knew would lead to that desired level of emissions.

44. In practice, no one knows exactly how New Zealander's will respond to direct changes in the price of emissions through a tax. Under a tax, there would therefore be an inevitable degree of uncertainty around the level of emissions that would result, and that the government would be responsible for, in any one year or commitment period. Similarly, under an ETS there is inevitably uncertainty around the price of emissions that would result. Also, with an internationally linked ETS the market will determine the level of domestic emission reductions. In this case, New Zealand's international obligations will be achieved through offshore emission reductions if they did not occur domestically.

45. A tax would provide greater emissions price certainty to emitters. However, it would subject the government and taxpayers to potentially very large fiscal costs, if the tax was set too low. Similarly, if the tax was set too high, the economy would face increased costs from having to adjust more quickly than necessary.

46. An ETS allows greater flexibility in terms of price adjustments. Prices adjust automatically in an ETS as international carbon prices adjust, whereas tax-based systems tend to be sticky as they can only be increased by an explicit government decision. There is therefore inevitability under a tax-based system that the price of emissions in New Zealand would not reflect the international price of emissions. This would increase the cost New Zealand incurs to meet its international obligations. Having said this, it is important to note that price volatility as implied by an ETS is not costless (although over time, ways to manage price volatility should emerge e.g. financial derivatives).

47. A ETS has considerable advantages when it comes to small open economies like New Zealand if there is a well-functioning international market for carbon[15], especially if the international price is subject to shocks. This is because under a tax, unless the

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15 See Suzi Kerr, Isabelle Sin and Joanna Hendy *Taxes vs. Permits: Options for Price-Based Climate Change Regulation*, Treasury Working Paper 05/02, p 18- 19, available at http://www.treasury.govt.nz/workingpapers/2005/wp05-02.asp

government continually adjusted the tax in response to these shocks, government would face fiscal risk and New Zealand would either over or under invest in emission reducing activities.

PREFERRED OPTION

48. A cap and trade emissions trading scheme (ETS) with a transitional introductory phase is the preferred option for meeting the detailed objectives set out above. It is a broad based price based mechanism that would result in the price of emissions being transmitted through the economy and as such would be an important component of the government's approach to meeting its sustainability and climate change goals. However, it is acknowledged that an ETS would sit within a suite of policies including direct regulatory measures, improved information and specific initiatives e.g. increased funding for relevant agricultural research. As such, while an ETS is an important element of NZ proposed climate change response, it is by no means the only element.

49. An ETS scheme sets the quantity of allowed emissions, the "cap", and the market then sets the price of these emissions through "trade". It is proposed that the New Zealand ETS will be international linked. A New Zealand ETS would operate within the international cap on emissions that is agreed through international negotiations (currently Kyoto). The market would determine the level of domestic versus international abatement that would occur.

50. One of the advantages of an ETS is that it is consistent with the nature of our international obligations (the Kyoto Protocol is a global cap and trade system). More generally, there is considerable strategic and economic benefit in taking the same broad approach to reducing emissions as some of our key trading partners.

51. The proposed NZ ETS would work by placing an obligation on participants to surrender emissions units to cover their emissions. Firms would have the flexibility to choose their best response to this obligation. Participating firms who value their emissions producing activities more than the cost of reducing them would purchase units, while firms who value their emission less than the cost of purchasing units would choose to reduce their emission output. In this way, trading would result in emission reductions being made by firms who can do so most cheaply and encourages innovation.

52. By internationally linking the scheme, trading can occur in the much larger and more liquid international market. This effectively allows NZ firms to take advantage of low cost abatement opportunities offshore. International linking is required to allow least cost emission reduction to occur.

53. A key element of the preferred option is a transitional period that will allow affected parties time to adjust and help address equity issues. In addition, entry dates for different sectors will be selected to enable any necessary administrative and operational issues to be addressed. These will be different, recognising varying levels of readiness. Initial preferences for dates for entry are set out in the table below.

Initial Preference for Dates of Commencement for Different Sectors

Sectors	Commencement of Monitoring and Reporting	End of initial compliance period
Land Use, Land Use Change and Forestry (LULUCF)	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 (coal etc - includes electricity generation)	1 January 2010	31 December 2010
Industrial process emissions	1 January 2010	31 December 2010
Agriculture	1 January 2013	31 December 2013
Waste	1 January 2013	31 December 2013
All other emissions	1 January 2013	31 December 2013

54. The core obligation placed on participating firms will be defined in absolute terms (tonnes of CO_2-e per year), rather then an intensity based measure (tonnes of CO_2-e per unit of activity). This will mean that participants must surrender one emission unit for every metric tonne of CO_2-e emitted each year. Adopting an absolute approach provides certainty over the (global) environmental outcome and is relatively simple to implement.

55. In each sector, there are usually a range of options for where to place the point of obligation e.g. you could make it "upstream" on the coal mine, or "down stream" on the power plant that burns the coal. Points of obligations have been proposed that:

- Keep compliance and administration cost low;
- Capture as many of a sectors emissions as practicable;
- Reflect the feasibility of monitoring and verifying emissions at each point ;
- Create appropriate incentives to reduce emissions while not unduly deterring worthwhile economic activity and investment.

56. Application of these criteria typically leads to placing points of obligation upstream in most cases. In the agricultural sector, for example, NZ ETS participants would be meat and dairy processors (for animal nitrous oxide and methane emissions) and fertilizer companies (for nitrous oxide emission directly attributable to nitrogen fertilisers), rather than individual farmers.

Impacts and Sector Specifics

57. The fundamental impact of an ETS is that it changes prices in the economy to reflect the cost of emissions. These will incentivise abatement activity which should see net emissions reducing from business-as-usual. Given the stringency of the Kyoto agreement, the overall macro impacts on the economy will be small over 2008-2012[16]. However the impacts on particular sectors of the economy (i.e. the micro-economic effects) could be more significant due to emissions being concentrated around certain activities and sectors. Some indicative price changes, to give a sense of potential magnitude, are shown in the table below. These assume no assistance or compensation has been provided. These changes would be the same under a carbon tax set at the corresponding emission price.

Price Changes Due to an ETS Assuming No Assistance or Compensation, Immediate entry	Emission price scenarios		
	$15/t CO_2-e	$25/t CO_2-e	$50/t CO_2-e
Households			
Average increase in household expenditure (per annum)[17]	$100-$200pa	$170-$330pa	$330-$660pa
Approximate % of total household expenditure.	0.3%-0.5%	0.5%-0.8%	1%-1.6%
Liquid fuels (transport)			
Petrol c/litre GST incl. (%increase over current price)	3.7c (2.5%)	6.1c (4%)	12.2 c (8%)
Diesel c/litre GST incl. (%increase over current price)	4c (4%)	6.7c (7%)	13.3c (14%)
Transport sector emission reductions in the medium-term (relative to business-as-usual)	0.3%	0.6%	1.1%
Electricity			
Wholesale c/kwh (% increase over business-as-usual)	0.7c (9%)	1.4c (19%)	2.9c (37%)
Retail c/kwh GST incl. (% increase over business-as-usual)	1c (5%)	2c (10%)	4c (20%)
Long-term (2020 and beyond) Electricity Generation Emission levels	Emissions at about current levels. - improvement over		1990 levels (around 3.5

[16] Refer to the Modelling work undertaken by ABARE to support the 2005 Review of Climate Change Policies

[17] Data from 2004 Household and Economic Survey, for a range of different household compositions, re-weighted for Treasury Taxmod, Inflated to March 2007 using Taxmod (for income and population) and disaggregated CPI inflators (for the components of household expenditure), No volume changes.

	business-as-usual. (around 6.5 million tons pa)		million tons pa)
Other fossil fuels			
Wholesale Gas $/GJ	$0.8 (11%)	$1.4 (18%)	$2.6 (35%)
Retail Gas $/GJ (GST incl.)	$0.9 (2%)	$1.7 (4%)	$2.8 (6.5%)
Wholesale Coal $/GJ	$1.5 (40%)	$2.5 (67%)	$4.9 (134%)
Agriculture (methane and nitrous oxide emissions only) – assuming no free allocation			
Dairy: reduction in payout if facing full cost (relative to payout of $4.56kg/ms)	-3.5%	-5.9%	-11.8%
Beef: reduction in payout if facing full cost (relative to current payout)	-6.3%	-10.4%	-20.9%
Sheepmeat: reduction in payout if facing full cost (relative to current payout)	-10.1%	-16.9%	-33.8%
Venison: reduction in payout if facing full cost (relative to current payout)	-12.8%	-21.4%	-42.8%

Firms and Industry

58. Most NZ firms will face costs and benefits under the ETS. Increased costs will occur under an ETS as a result of firms being required to surrender NZUs to cover their emissions, or due to them facing higher energy and fuel prices. Many firms will be able to pass a portion of these costs down the supply chain, reducing the impact on their profitability. But some firms will not be able to pass costs on, resulting in greater profit impact and a loss of competitiveness. The loss of competitiveness would be exacerbated if these firms competed with overseas firms that were not subject to the same price for emissions.

59. These impacts could be significant for some firms. This disproportionate impact raises equity concerns. But most importantly it may also lead to long term regrets if the ETS resulted in reduced output, or closure of a firm, that would have been competitive if its competitors faced greenhouse gas measures of a similar magnitude to those in NZ and there were a good chance that these competitors will face such a charge in the foreseeable future. There would also be a concern if particularly large or concentrated job losses resulted or New Zealand's reputation as a good place to do business relative to its neighbours and trading was damaged.

60. For these reasons the government is proposing an industry assistance package. The exact shape and nature of this package is to be the subject of engagement between industry and government. This assistance could be in the form of free allocation (where the government gives free units to firms) and/or some form of progressive obligation where the obligation to surrender units gradually increases through time.

61. Direct emission reductions from NZ industry over the next 10-15 years under an ETS will be somewhat constrained by the nature of the existing facilities, although there are still promising opportunities to reduce emissions. These include:

- Switching from using coal to using gas or biomass for industrial heat wherever possible;
- Increasing the use of cogeneration in conjunction with industrial heat production (cogeneration technology allows heat that is generated for industrial processes to be used to produce electricity as well).

62. Over the longer term, there are many new technologies that could allow for dramatic improvements in industrial energy efficiency and emission reductions.[18] However, in large, to take advantage of these new technologies new plant would need to be built.

63. The actual level of emission reduction will be determined by the price of emissions relative to the cost of the abatement activities.

Households

64. Households will face higher energy prices (e.g. petrol and electricity). The government is particularly concerned about impacts of electricity price increases on households and is considering compensation outside of the ETS. This compensation could include options such as extending energy efficiency programmes or an electricity rebate.

Transport

65. There will be relatively small emission reductions, relative to business-as-usual, in the transport sector as consumption does not change much when the price rises. In fact transport emissions are still expected to rise significantly over the long term (with key drivers being GDP and population growth). Pricing emissions will improve the cost effectiveness of new technologies for emission reduction to make them more widely available (and thus make them economic sooner than would have been the case). It will also ensure that those who are causing the emissions are paying for them.

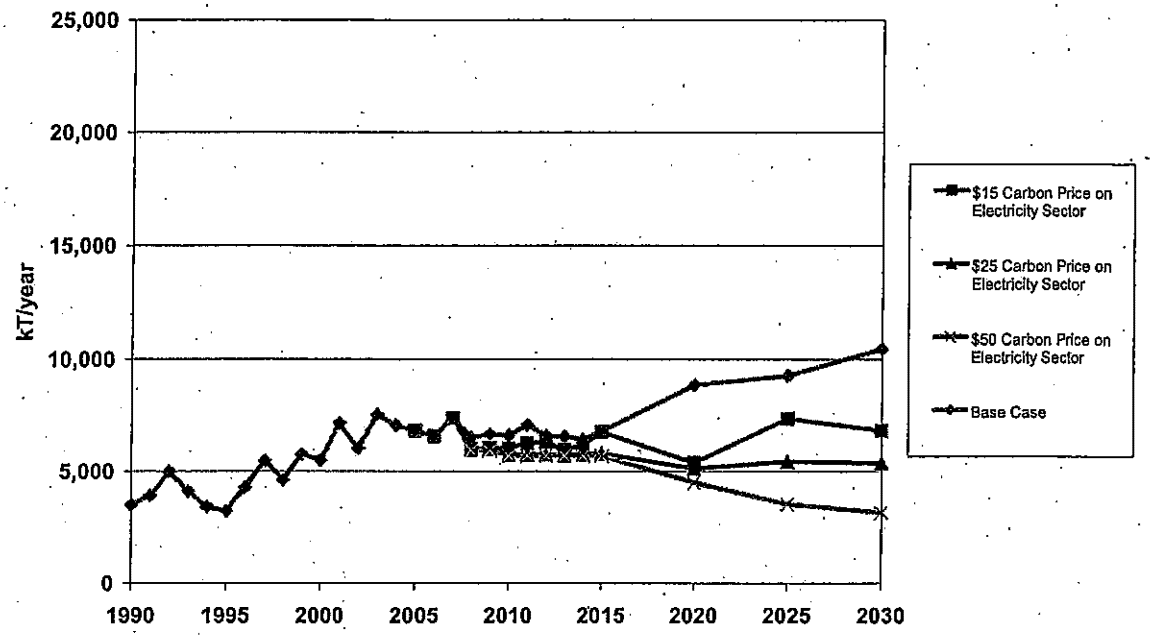
Electricity

66. Emissions from the electricity sector may not decrease much in the short term, but in the medium to longer term there should be significant emission reductions relative to business-as-usual (see graph below). This occurs as old thermal plant is replaced by plant with lower emissions (in particular new renewable generation capacity). Emission reduction would not be materially effected by compensation

18 For a discussion of some of the technologies that are available, or will be available soon, see International Energy Agency, *Energy. Technology Perspectives 2006*, Paris, 2006, http://www.iea.org/w/bookshop/b.aspx?Subject=Technology%20-%20RD, Chapter 7. Also see International Energy Agency, *Tracking Industrial Energy Efficiency and CO2 Emissions*, Paris, 2007, http://www.iea.org/w/bookshop/b.aspx.

offered to consumers outside of the ETS, as generators will still face the correct price signals when building new plant.

Electricity sector CO_2 emissions with emissions trading



Forestry

67. This sector is a priority for the government as the sector can be a significant driver behind NZ net total emissions (both in a positive and negative sense). There are both benefits and costs for participants to be in the scheme. Significant emissions could occur if this sector does not face the correct price signals for their deforestation of pre-1990 forests. On the other hand, the reduction of deforestation is likely to be one of the lower cost abatement options in the domestic economy in CP1.

68. It is currently estimated that for every 12 months that deforestation remains outside the ETS after 1 January 2008, increased emissions of 12-24Mt CO_2-e are likely to occur, resulting in increased costs to the Crown of $180-$360m. This reflects an assumption that owners would bring forward deforestation to avoid likely future controls. Current analysis suggests that deforestation would reduce substantially, and in many cases stop entirely, if the parties faced the full cost of the emissions involved.

69. Thus it is proposed that there will be compulsory entry for pre-1990 forests, but with a threshold to avoid high transaction costs. However, it is proposed that the scheme will be voluntary for post 1990 forest. That is, the owners of these forests will be given the choice to enter the ETS and receive all of the relevant sink credits and future liabilities. This is expected to be more-attractive for most investors than the existing (and on-going) Permanent Forest Sinks Initiative, because of restrictions under that initiative (although officials understand that these restrictions are seen by some investors as adding value).

Agriculture

70. Agriculture sector emissions represent almost half of New Zealand's total GHG emissions and are currently a significant source of New Zealand emissions growth (annual growth in emissions from this source in the period 2005-2010 is expected to average around 1.7 percent compounded). Any ETS that did not include agriculture emissions would be inconsistent with a least-cost approach to emissions reduction as the cost of these emissions would need to be absorbed elsewhere in the economy. It is important that the sector faces the full marginal price of emissions as soon as possible as growth in emissions is largely driven by conversion and intensification and these decisions would be influenced by facing the full marginal price of emissions.

71. The effects of the ETS on the agriculture sector are difficult to accurately predict for a number of reasons. Firstly, the government is signalling a preference for a processor/company level point of obligation in which case the price signals reaching farmers will likely be weak or distorted in some cases. Secondly, the agriculture sector is highly dynamic due to the ability for some farmers to readily change land use, the cyclical nature of commodity prices, and the apparent resilience of farm businesses and their ability to adapt to new conditions.

72. In the short term it is unlikely to expect strong emission reductions from the agricultural sector, if faced with a price of emissions, as current opportunities for abatement are limited, particularly around methane which represents about two-thirds of agriculture's emissions. However some opportunities exist around nitrogen inhibitors. In fact it appears likely that aggregate emissions from agriculture (and from the dairy sector in particular) will rise in the near term at least. The dairy industry would be taking into account the price of emissions when decisions are made that result in increases in emissions.

73. The farming sector is characterised by a large number of sellers producing relatively homogenous and perishable product meaning that farmers are also price takers. All costs introduced into the agriculture value chain (e.g. CO_2 related costs introduced at the processor level) are generally absorbed at the farm level. Introducing emissions trading in this sector may therefore have significant impacts on farm profitability and raise equity concerns at the farm level. In recognition of equity concerns the Government is proposing to use allocation policy to partially compensate farmers for lost profits. The potential effect of compensation is illustrated in the table below assuming free allocation to 2005 emissions (cf figures in table above).

Agriculture (methane and nitrous oxide emissions only) – Free Allocation to 2005 emissions, assuming a processor/company level Point of Obligation where all the benefits of a free allocation are incorporated into output supply prices			
Emission price	15$t/$CO_2$e		50$t/$CO_2$e
Dairy: reduction in payout (relative to payout of $4.56kg/ms)	-0.27%		-0.91%
Beef: reduction in payout (relative to current payout)	-0.38%		-1.26%
Sheepmeat: reduction in payout (relative to current payout)	-0.75%		-2.51%
Venison: reduction in payout (relative to current payout)	-0.89%		-2.96%

74. There are over 30,000 pastoral farmers in NZ and many potential difficulties in bringing them into an ETS. The Government acknowledges that engagement with the sector is required before the details of the scheme are finalised.

Impact over the longer term

75. The longer term impacts of an ETS will be driven by the stringency of international agreements going forward. As international agreements become more stringent[19], the impacts will increase, however, these could be moderated by technology improvements and by the degree to which international agreements become more comprehensive (i.e. the degree to which imbalances in global competitiveness between firms can be reduced).

Ongoing Analysis on Impacts

76. Work on quantifying the impacts of the ETS will be ongoing as the proposal is firmed up through the engagement process. The impacts will vary depending on the final form of the ETS (in particular, the level of assistance to firms and households). Also it is expected that the engagement process will provide additional information on the impacts of the proposed scheme. Final cabinet decisions will be informed by this refined information.

Risk Assessment

19 International arrangements for post-2012, and therefore the form and stringency of NZ's international commitments post-2012 are unknown, and are the subject of international negotiations and discussions that are now underway. Work is required to further develop NZ's international position for negotiations on post-2012.

Risk	Mitigation
High levels of volatility in the price of emissions result in increased uncertainty (and thus cost) for business	The NZ government will play an active role in International agreements to help ensure that the global carbon market develops in an orderly manner. Enable the development of financial instruments to allow firms to reduce their exposure to the volatility in the price of emissions. Consider measures to reduce the initial volatility that may be present during the establishment of a new market. Ensure as much liquidity as possible by linking to international markets. Consider the effects of government allocation decisions on market volatility.
There is a gap in international agreements after 2012	The NZ government will actively participant in international negotiations with a view to reaching international agreement on arrangements post-2012. Ensure flexibility in the design so that the operation of the scheme is not directly linked to any particular international agreement and can operate as a stand alone scheme if needed. Need to ensure adequate liquidity in the case of a stand alone scheme or maybe look at a price cap or floor.
Potential for market failure in certain sectors resulting in less emission reduction occurring then should given the price.	Complementary measures (e.g. energy efficient homes) can be targeted at areas where the price signal does achieve the desired level of emission reduction.
Businesses have difficulty accessing the emissions market	Ensure that the registry is "business friendly" including low transaction fees. Enable competition between a range of emission markets both within NZ and overseas (as a result of the scheme being internationally linked). Consider the nature of the firm when setting points of obligation (e.g. large firms, who have established trading desks should find it easier to participate in the market then a Small to Medium Business).
The international price of emissions rises to very high levels causing significant harm to NZ economy	Governments will need to make ongoing decisions about what further international commitments NZ is prepared to sign up to post-2012, including the stringency of emission reductions. New Zealand's position on this could consider factors such as the extent and nature of participation by other countries.

Transitioning to the new regime will be difficult/expensive	Have a transitional period and different dates of entry to recognise different levels of readiness.
Increased uncertainty and market volatility during the start up phase of the scheme.	Signal policies in advance as much as practical. Education and training for participants. Link to international markets to increase market liquidity.
Loss of firms with long term regrets	Governments will need to make ongoing decisions about what further international commitments NZ is prepared to sign up to post-2012, including the stringency of emission reductions. New Zealand's position on this could consider factors such as the extent and nature of participation by other countries. Government will look to provide an industry assistance package to reduce risk of firms shifting operations offshore as a result of the ETS.
Future international agreements are based around a carbon tax.	Ensure the ETS is easily modified to act as a tax (this would simply require the govt to provide unlimited units at a particular price – points of obligation, reporting and monitoring etc could remain unchanged) if this becomes necessary given global developments. Establish a regular review process for the scheme to take into account international developments.
Future international agreements move towards an intensity base approach.	Ensure the ETS can easily be modified to adopt an intensity based approach. Establish a regular review process for the scheme to take into account international developments.
Breach of commitment period reserve (a requirement under the Kyoto Protocol that all party nations retain at least 90% of their initial assigned amount of AAUs within their emissions unit register).	Breach is unlikely due to the expected net inflow of Kyoto units over CP1 and can be managed by allocation decisions and staggered sectoral entry into the NZ ETS
Required systems, processes or the administering agency are not fully functioning by the commencement of the scheme	Implementation issues will be an active area for engagement with sectors, especially for those first into the scheme e.g. forestry. Some implementation details will be worked on in parallel to the engagement process

Impact on the stock of regulation

77. While the ETS will operate as a new set of regulations that apply to the emission of GHGs, officials have designed a scheme that, to the greatest extent possible, meshes with existing regulations. For example, the calculation of obligations in respect of some activities, like the sale of liquid fuels, will also be identical to those used for the calculation of the existing excise regime. One particular focus of the proposed sector engagement will be to pursue further opportunities for regulatory alignment.

78. The existence of an ETS will mean that some interventions that have been discussed in consultation documents to reduce emissions will no longer be required (e.g. RMA standards on land use/deforestation, nitrogen tax).

Implementation and review

Compliance, enforcement and monitoring regime

79. Analysis of the implementation issues associated with the operation of an ETS has had to balance the desire to keep compliances costs as low as possible, with the need to ensure that the necessary enforcement and monitoring requirements are sufficient to ensure the scheme has environmental integrity. This is particularly important to ensure the scheme can make international linkages going forward. Comparative schemes internationally, have erred on the side of higher regulatory costs than are envisaged in the NZ scheme.

80. Compliance and enforcement procedures will be the subject of stakeholder engagement. However, it is proposed that the compliance system will be based on a 'self-assessment' methodology like that used in the New Zealand tax system. Under this system Participants will be responsible for complying with their obligations under the ETS and assumed to be in compliance unless subsequently challenged by the Administrative Agency. This system should result in far lower compliance costs for both Participants and the Administrative Agency than a full-regulation model and is consistent with the nature of the regulatory regime being imposed.

81. Participants will need to undertake a number of activities in order to meet the all the requirements of the compliance system including:

- Surrender one emissions unit for each tonne of CO_2-e emitted in each compliance period;
- Calculate their level of emissions using approved methodologies;
- Retain sufficient records to allow verification of emission calculations;
- Report their level of emissions, and emission units surrendered at the end of each compliance period, to the Administrative Agency;
- Comply with any directions of the Administrative Agency.

82. It is proposed that Participants' emission levels will be determined by multiplying the volume of an emitting activity (e.g. the importation or removal from an oil refinery of litres of petrol on which excise duty has been paid) by an emissions factor (e.g.

0.00240 tCO_2-e per litre of petrol) in a particular time period. Emissions factors will be provided, or approved, by the Administrative agency.

83. The Administrative agency will be given adequate rights to check the validity of information provided to it. Although a key part of any compliance and enforcement regime is the existence of penalties for non-compliance that incentivise compliance. In this regard any failure by a Participant to meet the core obligation will result in:

- A requirement to make up the surrender shortfall within 90 days of a determination by the Administering Agency that a Participant is in breach and at a ratio of 1:1; and
- A financial penalty of NZ$30 per tonne of CO_2-e emitted for which emission units have not been surrendered; and
- The publication of the Participant's identity and nature of the compliance failure.

84. Where a Participant knowingly fails to meet the core obligation the make-up requirement will increase to a ratio of 1:2. Also, the financial penalty will rise to NZ$60 per tonne of CO_2-e emitted and Participants (or their directors) will face the possibility of criminal conviction.

85. Failure to meet other obligations, such as the requirement to monitor and report emissions, will result in a financial penalty of up to $4,000 for the first infringement, $8,000 for the second infringement, and $12,000 for the third infringement. Where a Participant fails to meet these obligations knowingly, it will be subject to larger fines and possibly criminal conviction. This penalty structure is similar to that imposed under the self-assessment approach in the Tax Administration Act.

86. Further work is underway on the precise nature of the criminal liability provisions, including the enforcement mechanism and appropriate appeal procedures relating to decisions of the Administrating Agency will be included in the final scheme.

How the ETS will be given effect

87. It is proposed that the legislation for the ETS proceed as a new part of the Climate Change Response Act 2002 (CCRA). The CCRA implements New Zealand's obligations under the Kyoto Protocol to establish a national registry system. Many of the features for a New Zealand ETS already exist under the CCRA, although some will require modification. The purpose of the CCRA will also need to be amended to provide for a New Zealand ETS that continues beyond 2012.

Timetable

Phase	Summary	Timing
Phase 1: Setting out the ETS Policy Framework	Launch of scheme and release of an ETS Framework Document through public briefings and meetings with key stakeholders	Late September to Mid-October

	The establishment of a 'Business-Government Emissions Trading Leadership Group' to facilitate communication between government and business in both directions	
Phase 2: Engagement with Māori	Meetings with the Māori Hui Representative Group and Māori leaders, with regional hui in September Follow-up meetings as required	ongoing
Phase 3: Collaborative development of sectoral details	Collaborative process to discuss sectoral proposals at a greater level of detail, including facilitated cross-sectoral discussions, sectoral briefings, and one-on-one meetings with key stakeholders	Mid-September – mid-November for Forestry and Transport. October – mid-2008 for Stationary Energy and Industry. October – ongoing for Agriculture.
Phase 4: Legislation and implementation	Ongoing engagement with key stakeholders and Māori on subsequent design decisions, regulation and implementation Select Committee Process (including hearing of submissions from stakeholders)	November – ongoing

Review

88. It is proposed that the scheme undergo regular policy review to be concluded no later than nine months before the end of each commitment period (as defined in the relevant international agreement). As ETSs are complex policy instruments and it is likely that ongoing refinement of the details of the scheme will be necessary as firms and administrators gain more experience of the scheme. Furthermore, the New Zealand ETS will have to evolve to reflect changes in future international arrangements.

Consultation

89. In December 2005 Cabinet called for a work programme on alternative measures to a carbon tax. The work programmes culminated in the release of a series of Discussion documents in December 2006. The Discussion documents identified a wide range of potential policy measures to achieve climate change objectives. These documents can be found on the Ministry for the Environment's website[20].

20 http://www.mfe.govt.nz/issues/climate/consultation/index.html

90. The consultation process included approximately 50 public or multi-sector meetings, workshops and hui, and approximately 100 focused stakeholder meetings. The consultation events took place throughout the country with over 4,000 people attending. Written public submissions closed on 30 March 2007. Over 3000 submissions were received.

91. Although participants generally accepted the need for policies to respond to climate change, there was a broad range of views on the scope, timing and priority of response. These views reflect the wide range of stakeholders that hold strong views on possible climate change policies.

92. Many industry and NGO participants discussed the introduction of the price of greenhouse gas emissions into the economy. Among industry participants, discussion generally focused on emissions trading rather than greenhouse gas charges as the preferred longer-term price-based measure.

93. The majority of those submissions that held a clear view on emissions trading were in support of an emissions trading system. Many submitters considered that it would take time to implement an emissions trading system and proposed either only a policy signal or framework development in the interim (generally more business / industry submitters) or a greenhouse gas tax and/or regulatory measures as an interim measure (generally more environmental groups/interests). The majority of those submission that had a clear view on the coverage of price-based measures, were in support of coverage of all or most sectors.

94. Some submitters favoured a carbon tax. The reasons behind selecting an ETS as a preferred option have been discussed previously in this document. The view that an ETS would take time to develop and that other measures could be used in the interim is reflected in the preferred option having a transitional period.

95. There were a wide range of views expressed that are relevant for more detailed aspects of an ETS design e.g. around agriculture and forestry. These views have been considered, and further engagement will occur during the engagement phase of the ETS.

96. A wide range of departments have been consulted during the development of the preferred option, including Treasury, MfE, MoT, MAF, EECA, MED, MFAT, MoRST, DPMC, MSD, and TPK. There is broad consensus and no significant concerns over the proposal at this stage. However, the preferred option is subject to further engagement with stakeholders and Māori, that will inform further discussions with departments on issues raised relating to the design and implementation details of a proposed NZ ETS.

Consultation on Cabinet and Cabinet Committee Submissions

Certification by Department

Guidance on the consultation requirements for Cabinet and Cabinet committee papers is provided in chapter 11 of the Step by Step Guide: Cabinet and Cabinet Committee Processes, available at http://www.dpmc.govt.nz/cabinet/guide/11.html.

Departments/agencies consulted: The attached submission has implications for the following departments/agencies whose views have been sought and are accurately reflected in the submission:

The Department of Conservation, the Energy Efficiency and Conservation Authority, the Ministry of Agriculture and Forestry, the Ministry of Economic Development, the Ministry for the Environment, the Ministry of Foreign Affairs and Trade, the Ministry of Research, Science and Technology, the Ministry of Social Development, the Ministry of Transport, Te Puni Kokiri and the Treasury were consulted on previous Cabinet papers that contained much of this material. The Department of the Prime Minister and Cabinet was also consulted.

Departments/agencies informed: In addition, the following departments/agencies have an interest in the submission and have been informed:

.....

Others consulted: Other interested groups have been consulted as follows:

.....

Signature	Name, Title, Department	Date
	Dave Brash, General Manager Emissions Trading Group	21/8/07

Certification by Minister

Ministers should be prepared to update and amplify the advice below when the submission is discussed at Cabinet/Cabinet committee. The attached proposal:

Consultation at Ministerial level	☑ has been consulted with the Minister of Finance *[required for all submissions seeking new funding]* ☐ has been consulted with the following Minister(s): ..... ☐ did not need consultation with other Ministers
Discussion with Labour/ Progressive caucuses	☐ **has been** or ☑ **will be** consulted with the government caucuses ☐ does not need consultation with the government caucuses
Discussion with other parties	☐ **has been** consulted with the following other parties represented in Parliament: ☐ New Zealand First ☐ United Future ☐ Green Party ☐ Other [specify]..... ☑ **will be** consulted with the following other parties represented in Parliament: ☑ New Zealand First ☑ United Future ☑ Green Party ☑ Other [specify] Peters ☐ does not need consultation at parliamentary level

Signature	Portfolio	Date
	CLIMATE CHANGE	21/8/07