Office of the Convenor,
Ministerial Group on Climate Change

The Chair
CABINET POLICY COMMITTEE

CLIMATE CHANGE I: CONFIRMATION OF PREFERRED POLICY PACKAGE

PURPOSE

1. This paper seeks Cabinet confirmation of the policy package for New Zealand to meet its obligations under the Kyoto Protocol. It also seeks authorisation for New Zealand's ratification of the Kyoto Protocol, subject to enactment of the Climate Change Response Bill.

EXECUTIVE SUMMARY

2. Consultation on the Government's preferred policy package took place in May and June 2002. Stakeholders appear to understand and generally accept the policy direction. Where there is disagreement, this reflects views on both sides of the debate. Environmental and community groups are concerned that the policy does not adequately set New Zealand on the appropriate path to lower emissions. Some businesses, farmers and farm foresters are still concerned about ratification and key aspects of policy.

3. This paper asks Cabinet to confirm the policy approach with the following changes recommended to the previously agreed preferred policy package:

- Raising the deforestation cap to 21 million tonnes of carbon dioxide, to avoid perverse incentives to deforest before 2007
- Incentivising the establishment of permanent protection forest sinks
- Clarifying that the emissions charge will apply to emissions from process emissions and fugitive energy emissions, as well as emissions for energy supply and use
- Some specific voluntary policies for synthetic gases, targeted at the type of gas and its use.

4. An assessment of the effects of the policy indicates that there may be some small, energy-intensive businesses that will be affected by an emissions charge but are too small to utilise Negotiated Greenhouse Agreements or Projects. Officials will report back on any additional policy that might be needed to assist small to medium size enterprises to position themselves to respond to the policy framework. Otherwise, the implications of the policy appear to be manageable, especially as the policy for revenue recycling has not yet been finalised.

5. It is likely that the Kyoto Protocol will come into force in the near future, depending on when the Russian Federation ratifies. It is recommended that Cabinet agree that New Zealand should ratify the Protocol once the Climate Change Response Bill has been passed.

BACKGROUND

6. On 11 February 2002, Cabinet agreed in principle to ratify the Kyoto Protocol prior to the World Summit on Sustainable Development (August 2002). This decision was subject to:

- Select Committee consideration of the National Interest Analysis
- Passage of the necessary legislation for ratification (ie the Climate Change Response Bill)
- Final decisions on the preferred policy approach.

7. On 29 April 2002 Cabinet agreed its preferred policy approach and directed officials to report back after consultation (*CAB Min (02) 13/10 refers).*

8. Since that time, the Select Committee has reported back with a majority recommendation to ratify the Kyoto Protocol, and the Climate Response Bill has been introduced into the House and referred to Select Committee.

RATIFICATION AND THE INTERNATIONAL PERSPECTIVE

9. As of 30 August, 89 countries have ratified the Kyoto Protocol including the 15 member states of the EU, Japan, Norway, Iceland and a number of Eastern European countries. Developed countries that have ratified now total 37.1% of 1990 developed country CO_2 emissions. This will shortly rise to 40.1% with Poland's Parliament having recently approved ratification. The Kyoto Protocol will then enter into force following ratification by the Russian Federation, which seems likely following Prime Minister Kasyanov's announcement at the World Summit on Sustainable Development that "Russia has signed the Kyoto Protocol and we are now preparing its ratification … we consider that ratification will take place in the very nearest future."

10. Australia has now formally joined the United States and declared it does not intend to ratify the Protocol. It is as yet unclear whether Canada will ratify, although Prime Minister Chretien has recently stated that Canada would "probably" ratify and the question will be voted on in the Canadian Federal Parliament before the end of the year. However, most countries, even those who are not ratifying the Protocol are now focusing on implementing policies to limit release of greenhouse gases and building low emission economies. For example, Australia has said that it plans to meet its Kyoto target, the US federal government has announced new measures aimed at achieving emissions intensity targets and the State of California has implemented new legislation requiring all auto manufacturers selling into the State to meet fleet-averaged greenhouse gas emission standards from 2007.

11. These developments will, in turn, have a significant effect on global markets - driving the competitive positioning of firms and industries. It is likely that this market dynamic will be reinforced over time through increasing consumer awareness and demand for higher environmental performance as well as greater recognition of greenhouse gas emissions in international regulatory and trade responses. Consequently, opportunities will be created for those businesses whose products have low associated emissions.

12. These global dynamics mean transitioning to a low emission economy is not only about meeting New Zealand's Kyoto Protocol obligations, but is also about the long term competitive positioning of the New Zealand economy.

13. While there are some threats for those businesses with high emissions intensity, the policy package presented in this paper for confirmation provides mechanisms for these businesses to assist in the transition to lower emissions, should technologies allow.

14. While the decision of the USA and Australia not to ratify the Kyoto Protocol is disappointing, most other countries are doing so and entry into force is now likely. This and global greenhouse developments lends support for the Government's intention to ratify.

OUTCOMES FROM CONSULTATION ON NEW ZEALAND'S PREFERRED POLICY PACKAGE

15. Throughout May 2002 a series of 49 meetings was held in main centres throughout New Zealand on the preferred policy package:

- 3 national meetings in Auckland, Wellington and Christchurch
- 13 meetings for local government
- 13 meetings for special interest and business groups
- 11 meetings for agricultural and forestry groups
- 8 regional and one national hui.

16. In addition, several thousand consultation packs were mailed to stakeholders. Submissions closed on 14 June 2002. 1118 submissions were received (including around 800 form submissions from Greenpeace supporters). Reports on consultation are being prepared and will be posted on the Climate Change website.

Common themes from consultation

17. A summary of the key themes from consultation is set out below.

Overall impression

- A reinforced understanding of the need to do something about climate change but no real consensus on how and over what time frame to respond
- On balance, stakeholders appear to understand and generally accept the policy direction. Many have said they agree or generally agree with the overall approach of the policy package. Where they disagree, or generally disagree, this reflects views on both sides of the debate. Environmental and community groups are concerned that the policy relies too much on sinks, has provided too many concessions to industry and does not adequately set New Zealand on the appropriate path to lower emissions. Some businesses, farming groups and farm foresters are still concerned about ratification in advance of some of New Zealand's major trading partners (e.g. Australia and the USA), and also about policy issues - the emissions charge, sinks policy and potential future changes in government policy (e.g. second commitment period charges on non-CO2 gases)
- A common theme across stakeholders is the need for the policy to be balanced and fair, and a concern that, so far, there is not enough known about key details, e.g. revenue recycling, for them to fully judge the merits of the policy.

Foundation policies

- Foundation policies are very important and need proper funding. However concerns were expressed about the Government's commitment to adequately support these programmes

- Strong demand for climate friendly transport policies. Transport is seen as the biggest growing problem for New Zealand yet the New Zealand Transport Strategy is seen as not as advanced as other strategies in addressing emissions
- Concern was expressed at the lack of policy and planning for public awareness. There is a lot of work to do on informing/advising/educating
- Concern at the lack of an overarching framework/strategy for energy especially given the future of Maui.

Forest Sinks

- While the view that sink credits should be devolved to forest owners/managers was common, it was by no means universal, with a minority of forest owners considering that the best option for managing the forest sink credits and liabilities was Government retention
- Strong agreement that incentives for sinks should be used for establishing permanent protection forests
- Broad support for initiatives generating sink credits and reducing sink liabilities that also generically benefited the entire forestry sector, such as additional market development initiatives and research
- General support amongst Maori for the Crown entering joint ventures with landowners to create new plantation forest sinks
- Concern from some that the policy does not recognise/give credits to investors who have already developed forest sinks
- Concern over limited nature of deforestation cap, after which private forest owners might bare the carbon liaibility resulting from forest conversion to other land uses
- Concerns by some farm foresters that they will be unable to trade their forest carbon sinks against any costs of research to reduce their livestock emissions.

Emissions charge

- Demand for more information on how the charge will be applied
- Concern about fairness of the charge, for example, the competitiveness-at-risk group and farmers do not have to pay, but there will be sizeable costs for “general energy” coal users – especially in the South Island
- Particular concern from those small to medium sized businesses with large energy costs and few obvious options for switching to alternative sources
- Reasonable level of comfort with the charge as long as revenue is used to reduce emissions and unfair effects on business of the charge
- Concern that the charge will do nothing to encourage changes in behaviour, especially in a key sector like transport.

Revenue recycling

- A strong need to understand how revenue will be recycled before final judgement on the policy package and its effect
- Suspicion that revenue will not be returned to the economy and that it would “disappear into the consolidated fund”
- Strong demand for revenue to be used for mitigation, adaptation and other climate change related activities – or to help businesses and people affected by the charge. A strong “regional equity” flavour to this issue, especially from the South Island (where concerns were expressed about having to pay proportionately greater costs from use of coal and electricity when a high proportion of New Zealand’s non-CO_2 emitting hydroelectric power is generated there)

Competitiveness-at-risk group and Negotiated Greenhouse Agreements (NGAs)

- Not fair that only big companies/high emitters will get NGAs. The assumption that small business can simply pass on costs is wrong – they export too and will not be able to compete against imports from non-Kyoto countries
- A significant amount of interest in who will be eligible for NGAs and how easy will it be to get an NGA
- A concern about how "international best practice" will be applied and be relevant to New Zealand national circumstances.

Projects

- Mixed interest in projects – largely supportive
- Interest in the funding that will be available and how it would work
- Demand from some for regional allocation for project funding.

Agriculture

The majority of farmers consulted were opposed to New Zealand's ratification of the Kyoto Protocol at this time. However, there appeared a general acceptance that climate change was a real issue and that some kind of action should be taken. Concerns expressed were:

- Possible detriment to New Zealand's competitive position, by imposing additional costs (particularly to fund mitigation research and increased energy costs) on the agricultural sector
- That the Protocol would not effectively address climate change
- New Zealand should not be leading our major trading partners in ratification
- The measurement difficulties make it impossible to accurately determine the effect of agriculture on the climate
- Certain sectors of the horticultural industry would be seriously affected by cost increases, for example, coal for glasshouse heating
- Why those who have undertaken forestry projects (for which they are not rewarded) should have to pay for energy emissions.

Maori issues

- Maori want to be included in policy at all stages of development
- Some Maori proposed that the Government should defer its decision to ratify.
- Lack of discussion from Government on issues in relation to Article 2 of the Treaty
- Maori, as large owners of rural land, were pleased with the Government's decision not to impose emissions charges on agricultural methane and nitrous oxide emissions
- Concern over the limit (or cap) the Crown was proposing on the extent to which it would cover the deforestation liability due to forest conversion to other land uses
- Some recognition of the need for action reflecting Maori kaitiaki role.

Local Government partnership

- Cautious acceptance of local government partnership. Acceptance dependent on Government not simply devolving responsibility, and providing adequate funding

RMA amendment

- RMA amendment – majority agreement with proposed amendment to remove greenhouse gases from the RMA, but still some opposition from a few councils
- Need for further consultation regarding the details of the amendment
- Some general messages that more guidance or direction may be needed from central government about planning for sustainable urban form, or sustainable development generally
- Some written submitters sought amendments to the RMA to prioritise renewable energy.

Key Adjustments to the Preferred Policy Package

18. The preferred policy package is described in CAB Min (02) 13/10. Having considered the key messages from consultation, the preferred policy package can be confirmed with just a small number of changes, clarifications and additional policies. These are described below.

Policy on forest sinks

Change to the deforestation liability cap

19. The Government's proposal to retain deforestation liabilities arising from forest conversion to other land uses has been widely welcomed by the forestry, agricultural and Maori communities. There were, however, concerns about the quantitative limit (or cap) on the extent to which the Crown's accepted liability, of 5% of the expected annual harvest volume during the first commitment period (CP1). Stakeholders thought that this cap might encourage foresters to deforest early before the cap is breached. Maori were particularly concerned to know what the Government's response would be in the event that the cap was reached or appeared likely to be breached.

20. …

21. Based on the limited data available on deforestation, officials are reasonably confident that the proposed 5% cap is sufficient to allow forest owners to make changes in land use at historical rates. Officials agree, however, that setting a deforestation cap too low has the potential to incentivise additional deforestation by encouraging foresters considering deforestation to 'get in early' before the cap is reached. However, this will only occur to the extent that avoiding the liability has greater economic benefit than the value to be obtained from retaining the forest to optimal harvest maturity.

22. The advantages of raising the cap, as opposed to removing it altogether, are that this would send a signal to forest investors and landowners that the possibility of a future deforestation liability is something that they should consider when renegotiating lease agreements or considering replanting harvested forests from now on. This in turn should help strengthen the Crown's position if it ever considers that the devolution of both sink credits and deforestation liabilities is appropriate. It would also form a major quantifiable part of the Government's response to the forest sector's request for "a significant proportion of the value of the credits to be returned to the sector".

23. The disadvantages of raising the deforestation cap are that it sends a signal to forest owners that additional deforestation, over and above current levels is acceptable, which is contrary to Government policy of encouraging sink creation. If there is a risk that there would be a deforestation liability for foresters in the second commitment period, a cap above business-as-usual deforestation levels could create a perverse incentive to deforest in the first commitment period. In addition, if additional deforestation does result from a higher cap, less funding would be available for other measures such as projects or direct forestry investment.

Table 1: Current Estimated Deforestation rates in New Zealand Plantation Forests

Year	Total area harvested	% of forest area harvested and not planned to be replanted
2000	38,000 ha	2.4 – 4.8
2001p	40,660 ha	1.4 – 2.8

Source: MAF

Note: the figure at the bottom end of the range reflects the expected level of deforestation as reported by respondents to the survey. The figure at the upper end of the range is a doubling of the reported deforestation area to allow for non-response to the survey.

24. The contingent liability included in the Crown's accounts for deforestation will reflect an expected rate of deforestation over the commitment period or the deforestation cap, whichever is the lesser. In practical terms this is likely to be based on historic data. On the basis of the above table, and given that deforestation rates for 2000 are considered to be relatively high, it appears unlikely that the cap would be reached under either a 5% or 10% scenario. Lifting the cap, or removing it altogether is therefore unlikely to have any negative fiscal implications.

25. On balance, the advantages of raising the cap exceed the disadvantages. It is therefore proposed that the cap be increased to 21 million tonnes of CO_2 equivalent (approximately 10% of the forests expected to be harvested during CP1). This represents 20% of expected sink credits and 40% of possible surplus credits once growth in other emissions have been covered. Officials consider a cap of this magnitude would exceed all reasonable expectations of deforestation rates during the commitment period, and would therefore alleviate the risk of a cap creating a perverse incentive to deforest early.

26. Regardless of the level of a cap, the Government should make a policy statement to the effect that, in the event that significant deforestation occurs at levels above expectations, the Government will consider its policy options to manage emissions within the cap, including:

- how deforestation rights within the cap will be allocated
- how to monitor and enforce the deforestation cap
- what actions the Government will take in the event that the cap is exceeded.

Changes to policy on incentivising permanent sinks

27. There was wide support, including strong support from Maori, for a mechanism to encourage the establishment of reversion to permanent protection forests, particularly on marginal agricultural land. The clearly preferred model (option one) would be for land owners to receive 'returns' in proportion to the carbon actually sequestered by a given stand, in return for covenanting and managing the land to create a permanent protection forest. Forest owners would receive 'returns' only after the amount of carbon sequestered has been measured and verified. All costs and risks associated with the release of the carbon from a stand would be borne by

the landowner. Such a regime would not require the Government to set aside funds to provide incentives. To the extent that the Crown's administration of such a scheme incurred costs, these could be recovered by retaining a proportion of the value of sink credits generated. Many submitters considered that sustainable forest management that allowed a restricted harvest, such as under the indigenous forest sustainability rules of the Forests Act 1949, should also be allowed once the forest eventually reached maturity (in say 80 to 100 years). However this would potentially create considerable difficulties in assessing whether a forest was permanent protection or not. Cabinet is therefore not being asked to agree to such an approach.

28. One possible detriment of such a regime is the perception of inconsistency with the Government's policy of retaining all sink credits and harvest liabilities. This issue could be addressed to some extent in the design of the mechanism by not issuing credits directly but rather by providing some form of tradable instrument in much the same way as the Projects mechanism is likely to operate.

29. Another option (option 2) that received broad public support is to use sinks revenue to fund the legal protection and management of newly regenerated forest areas where the forest owners did not seek any payment for the carbon sequestered, eg to pay for the costs of covenanting and fencing. Existing mechanisms such as the QEII National Trust, the Nga Whenua Rahui and Nature Heritage Funds could have a role.

30. Both options are likely to generate additional value for New Zealand, while also resulting in spin-off environmental benefits, such as reduced erosion, increased biodiversity, and improved water quality. It is proposed that Cabinet agree in principle to option 1, subject to details of a final proposal and agree to a work programme for option 2. A work programme for both options is included in paper III of this series.

Clarification of the application of the emissions charge

31. The preferred policy package included an emissions charge on CO_2 equivalent emissions in sectors of the economy not covered under the competitiveness-at-risk NGAs programme.

32. Consultation indicated confusion about which emissions the emissions charge would apply to. To clarify the situation, the charge will cover emissions of CO_2, including but not limited to those from fossil fuel combustion and process emissions. It will also cover some fugitive[1] and process emissions of non-CO_2 gases, where they are readily measured and to which a charge can be cost-effectively applied. The kinds of emissions subject to the charge therefore include:

- Emissions from energy supply and use
- Process emissions
- Fugitive energy emissions

33. Work is underway to clarify legal questions on application of the Protocol to aviation and marine bunker fuels and the application of a charge to domestic aviation given our air services agreements.

34. The following emissions will not be subject to the charge:

[1] Fugitive emissions are those from dispersed non-point sources, e.g. flaring at oil and gas production sites, leaks from gas distribution lines or methane emissions from coal mines

- emissions from the competitiveness-at-risk (CAR) group that also negotiate an NGA receive full or partial exemption (or an equivalent rebate).
- emissions that are not counted in New Zealand's inventory
- synthetic gas emissions
- methane and nitrous oxide emissions from farming and methane from the waste sector.

Additional policies for small to medium size enterprises

35. A concern has been raised through the consultation process that the proposed policies, particularly NGAs and Projects, are biased towards larger firms. The NGA programme, for example, is most likely to apply to larger competitiveness-at-risk firms due to information needs and administration/overhead costs. This means that smaller firms who are competitiveness-at-risk may need alternative means to assist with the transition to lower emissions. The Projects programme may also have implied size thresholds because of administrative and compliance costs. Small and medium sized enterprises may therefore need targeted programmes. These could either be through additional policies or refinements to the existing programmes, Projects and NGA mechanisms.

36. Officials will report back by 31 March 2003 on any additional policies that may be required to encourage small and medium size businesses to participate in emissions reduction. Officials will also report back on whether additional policies are needed to mitigate possible adverse effects on small businesses of an emissions charge. Farmers also represent a large proportion of New Zealand small businesses and should be included in any assessment.

Policy for synthetic gases

37. The preferred policy for synthetic gases did not cover all uses of synthetic gases. Following discussions with industry, the final recommended policy for synthetic gases is:

- Voluntary handling, education and recovery programme for refrigeration and insulation uses of HFCs and PFCs, linked with Montreal Protocol programmes
- No requirements for HFCs in aerosols, including aerosol cans, asthma puffers and fire extinguishers, for health and safety reasons
- Industry will work together and share information to limit leakage of SF_6. A full industry proposal will be provided to Government by mid February 2003
- Policy for synthetic gases will be reviewed in 2005.

Further developments to the policy foundations

38. The package now includes more developed policies for public awareness, business opportunities and the partnership for local Government. These policies are discussed more fully in paper II of this series.

THE CONFIRMED POLICY PACKAGE

39. The following (Table 2) summarises the proposed policy approach to meet New Zealand's obligations under the Framework Convention on Climate Change and Kyoto Protocol. Items shown in bold reflect clarifications or changes from the previously agreed preferred policy package.

Table 2 – the Confirmed Climate Change Policy Package

Foundation policies

The following foundation policies apply to both the pre and post commitment periods.

- National Energy Efficiency and Conservation Strategy
- The New Zealand Waste Strategy
- The New Zealand Transport Strategy
- Public Awareness Programme
- Partnership between local and central government
- Research
- Business Opportunities Programme
- Growth and Innovation Framework
- Adaptation to the effects of climate change

Pre commitment period policy	**Commitment period policy**
	• Introduction of an emissions charge from 2007. The charge will approximate the international price of emissions, but will be capped at \$25 per tonne of CO_2 equivalent[2]. • The charge will apply to emissions from energy supply and use; **process emissions and fugitive energy emissions, unless exempted or rebated through a Negotiated Greenhouse Agreement** • **Further work is required to determine whether the emissions charge will be applied to emissions from domestic bunker fuels used in shipping and aviation;** • Retain option to introduce emissions trading if conditions permit (i.e. there is a stable international market, and the price is reliably under \$25 per tonne of CO_2 equivalent) • Redistribute all revenue from climate change policies back into the economy, for example through the tax system **and climate change Projects/programmes**. • Retain sink credit assets and liabilities • Cap deforestation liabilities at **21** million tonnes of CO_2 equivalent • Mechanisms to encourage forest sinks, **including a mechanism to encourage permanent protection forest sinks**
• **Investigate possible additional policy for small to medium sized businesses**	
• Negotiated Greenhouse agreements for competitiveness-at-risk firms	• Negotiated Greenhouse agreements for competitiveness-at-risk firms
• Projects to incentivise emissions reductions	• Projects to incentivise emissions reductions.
• Industry funded research for the on-farm agriculture group. Retain option to apply research levy.	• Industry funded research for the on-farm agriculture group. Retain option to apply research levy.
• **Voluntary programme for HFCs and PFCs, linked with Montreal Protocol programmes (except for HFCs in aerosols)**	• Policy for synthetic gases and methane emissions from waste dependent on outcome of review in 2005
• **Industry agreement to work together and share information to limit leakage of SF_6.**	
• Rely on New Zealand Waste Strategy for methane emissions from waste. Review in 2005.	
• Amend RMA to remove regional council ability to directly control greenhouse gas discharges through consents and plans	

[2] The cap will be inflation adjusted.

40. As set out in the preferred policy in CAB Min (02) 13/10, the package allows for reviews in 2005, 2007 and 2010 to ensure that the policy is still valid and appropriate for New Zealand.

ASSESSMENT OF EFFECTS OF POLICY

41. The package has been designed to limit the effects of the policy on certain parts of the economy and society, through:
- The $25 cap on the emissions charge
- NGAs
- No charge on agricultural methane and nitrous oxide
- Incentive based or voluntary policies such as Projects
- Revenue recycling.

42. The revenue recycling policy still needs to be developed so the discussion below assesses the effects of the policy without the positive effects of revenue recycling. It provides useful guidance for future policy work on revenue recycling.

43. The policy that is likely to most affect businesses and individuals is the emissions charge on emissions from energy use. Impacts of this charge on different income groups and on businesses are briefly discussed below:

Macroeconomic effects

44. As highlighted in earlier papers, the broad expectation is that during the first commitment period the effects of the policy package on the economy are likely to be small. Modelling work completed by ABARE last year indicated that, for a scenario with an international emissions price of around $60/tonne and where agriculture, iron and steel, and aluminium process emissions are exempted, there would be a positive impact on national income (GNP would be 0.6% higher than it otherwise would be) but a small decline in output (GDP would be lower by 0.1%) during the first commitment period.

45. The preliminary results of further work by ABARE to model the preferred policy package support earlier findings that the effects on GNP and GDP will be small. For example in a scenario where a wider range of at-risk industries are exempt and the charge is capped at $25/tonne, GDP would be only 0.08% lower than it otherwise would be and GNP would be 0.02% higher. These changes are so small it is difficult to say they are materially different from the status quo.

46. To the extent that the small negative impact on GDP is real, it probably reflects the cost increases associated with the emissions charge. The negative effect is smaller under the preferred policy package scenario than earlier modelling because the NGA mechanism has been extended to cover more at-risk firms.

47. The extent of the positive impact on national income is dependent on the number of excess emission units from sinks available for sale and the international emissions price. In the latest ABARE results, the increase in GNP is expected to be relatively lower because the price received for the sale of excess sink credits is lower in the latest results. In addition, a greater number of emission units are required to offset at-risk firm emissions.

48. Note that the latest ABARE modelling uses a different reference case (what would otherwise occur) for comparing the scenario results than last year's work. This was done to update the model for more recent data, to more accurately reflect the

international context, and to amend several features of the model to better reflect the New Zealand economy.

49. Estimates of the increase in residential petrol, electricity, gas and coal prices suggest that a direct increase in the CPI of around 0.5% would be expected. Further indirect price increases would also result due to higher energy costs for the production of all goods and services, and inter-industry transactions would also result. With current data it is not possible to accurately model these indirect effects for New Zealand. A monetary policy response would only be expected if this price rise led to an increase in inflationary expectations. The intention of revenue recycling (for example through the tax system) would be to reduce the adverse affects of price rises resulting from the emissions charge.

Long term economic growth

50. The objective of climate change policy needs to be balanced with other Government objectives. The Government has expressed a desire to increase the sustainable economic growth rate and has put in place policies to help achieve this.

51. Ratification of the Kyoto Protocol and the introduction of further environmental regulations may, at the margin, decrease the relative attractiveness of investing in a business in New Zealand compared to non-ratifying countries. This may result in a decline in the start up rate for small businesses and an increase in the number of firms taking their production activities elsewhere. Alternatively a number of firms have expressed the view that the Kyoto Protocol offers them business opportunities and that there may be global marketing advantages of being located in a Protocol compliant country. Further, ratification may also attract new business investment particularly from firms currently located in non-ratifying Annex 1 countries who are keen to take advantage of the trading mechanisms provided under the Protocol.

52. The pricing of carbon emissions may promote the development of a green technology industry.

Effects on different income groups

53. The proposed policy would result in an increase in consumer prices, discussed under macroeconomic impacts. Previous papers have reported that this would result in an increase in the average household expenditure of between $2 to $5 per week. There is also potential for second round, indirect price increases to occur, as higher energy prices increase the cost of producing other consumer items. Price increases are uncertain as the extent to which increased costs may be passed on will vary.

54. Because social welfare transfers are indexed to the rate of inflation, these would rise automatically, offsetting the impact to beneficiaries. Real wages for other groups are likely to decline.

55. There is a question about how the price changes arising from the emissions charge are likely to affect different income groups. Studies in Germany, the UK and Australia have found that an emissions charge is likely to have a small regressive effect. That is, lower income groups are more affected than high income groups by a emissions charge. These studies looked at substantially higher emissions charge rates, so it is likely that the regressivity of the proposed emissions charge in New Zealand will be small. Further work will be necessary to assess the actual effect on different income groups as part of the development of the emissions charge and the revenue recycling policy. The latter may be a means by which inequalities of impacts are mitigated.

56. Some of the effects of a emissions charge can be mitigated by improving energy efficiency. Achievement of the NEECS target of a 20% improvement in energy efficiency by 2012 will translate through to lower energy costs for consumers. While further programme development and resourcing will be required, NEECS programmes can be specifically targeted to address possible at-risk groups.

Effects on businesses

57. A review of international literature together with studies commissioned by the Climate Change Project examining the implications of the proposed charge on twenty-six firms indicates that for most of the businesses surveyed, the effect of an emissions charge should be minimal. In most cases, the emissions charge would impact on the businesses' profits by less than 5% assuming no offsetting actions were taken. The study did not take into account any revenue recycling of the charge back into the businesses. The study indicated that these cost effects would not affect long term viability.

58. However, the studies undertaken indicate that a few companies could be significantly affected by the emissions charge. There are a number of small to medium size businesses that could be eligible for competitiveness-at-risk status. One small survey commissioned by officials showed that two out of the eighteen companies surveyed would be significantly affected and could meet the broad competitiveness-at-risk criteria set out in the preferred policy. However, it is not possible to extrapolate from the results of this study as the firms surveyed do not reflect the distribution of industries in New Zealand. In addition, some South Island business may be less competitive than their North Island counterparts because of the lack of availability of natural gas. As discussed in paragraph 36, officials will be undertaking further work to identify the best means to manage the cost implications of an emissions charge for heavily affected small to medium businesses – in particular affected sectors and regions.

59. The coal industry, and heavy coal users (for example hothouse horticultural producers in the South Island) could be significantly affected by the charge in the long term. Coal is a high emitting fuel and the climate change policy package will inevitably encourage movement away from the coal industry to lower emitting energy sources at a faster rate than might have otherwise occurred. This kind of outcome is what is required to give effect to climate change policies. Providing a signal to this industry six years in advance that there will be additional costs will assist coal users to plan for these changes. Further refinement of the policies in the package may also be used to assist with the transition, such as Projects.

60. There will be some general compliance costs associated with the emissions charge (at point of application) and applications for NGAs (although these are voluntary). The agricultural research funding either on a voluntary or mandatory basis will create some additional cost for the agricultural sector. These will be assessed when officials report back in March 2003 with the detail of how these policies will be implemented.

Effects on agriculture

61. Farmers raised concerns during consultation that the costs for agriculture would still be high even though the proposed emissions charge would not cover agricultural methane and nitrous oxide emissions. The following table provides estimates of the likely gross effect of proposed climate change policies on three

average farming operations, assuming an emissions charge of $20 per tonne CO_2 and before the possible countervailing impact of any revenue recycling.

Table 3: Likely Financial Impact of Climate Change Policies, Assuming a $20 Emissions charge, on Three Average Farming Systems* (Excluding Any Countervailing Effect of Revenue Recycling)

	Dairy	Sheep & Beef	Mixed Cropping
Increase Energy and Fertiliser (@ $20 per tonne CO_2)	$1,124	$876	$2174
Research Contribution (assuming 15 cents / stock unit**)	$272	$705	$175
Total	**$1,396**	**$1,581**	**$2,349**
Cost increase as % of Expenses	0.8%	1.1%	1.6%
Cost increase as % of Farm Surplus*	0.6%	1.0%	1.0%

* Derived from MAF farm monitoring data 2000/01
** Avg Stock Units Diary = 1814 Sheep & Beef = 4703 Mixed Cropping = 1165
***Farm Surplus does not include interest, rent, depreciation or tax.
Source: Ministry of Agriculture and Forestry

62. Table 3 shows the gross price effect of climate change policies on those farm expenses and likely to be most affected by the preferred policy package. The table shows that the cost increases (excluding any inflationary effects) due to climate change polices are likely to be around1% of total farm expenses, with a similar impact on farm surplus. Economic literature indicates that costs increases of this magnitude are generally not high enough to effect competitiveness.

63. Some additional cost effects may occur through flow-on cost increases in other inputs and services (e.g. transport), which are not able to be calculated at this time.

64. Because agriculture is being protected from the full costs of GHG emissions, over-investment may occur. Agriculture will be relatively more profitable than under a tax imposed on methane and nitrous oxide emissions. Continuing growth in activities such as dairying will raise New Zealand's GHG emissions without consideration for the emissions costs.

TRADE POLICY IMPLICATIONS

65. Measures in the policy package may have implications regarding New Zealand's international trade rights and obligations. Papers II and III begin the process of refining the specific design details of the measures in the policy package. Further analysis of specific trade policy issues may be required as details develop. Officials will therefore report back on the WTO implications of key policies including Projects, sink enhancement incentives, competitiveness-at-risk criteria and the emissions charge as the detail of these policies is developed.

CONCLUSION AND NEXT STEPS

66. The international developments, feedback from consultation and the assessment of the implications of the confirmed policy package indicate that the Government should continue with ratification of the Kyoto Protocol.

67. The election has delayed the passing of the Climate Change Response Bill and Cabinet consideration of these papers confirming the Government's policy approach. If the legislation can be passed in time, it may be possible to ratify by the

next Framework Convention Conference of the Parties (COP8) in mid to late-October, or at the latest by the end of this year.

68. The confirmed policy package proposed here is not intended to provide all the policy details from now to 2007 and from 2008-2012. It is still a framework package. It will be important to regularly review policies and continually monitor innovative policy measures being undertaken in other jurisdictions grappling with the same issues. However it is intended to provide sufficient detail to assist businesses and communities to have certainty about the intent and nature of specific programme elements. Most need a work programme of actions to make them operational. Paper III of this series sets out this work programme and associated budget.

CONSULTATION

69. The following departments have been consulted in the preparation of this paper: Ministry of Agriculture and Forestry, Ministry of Consumer Affairs, Ministry of Defence, Ministry of Economic Development, Ministry of Education, Ministry for the Environment, Ministry of Fisheries, Ministry of Foreign Affairs and Trade, Ministry of Health, Ministry of Justice, Ministry of Social Development, Ministry of Research, Science and Technology, Ministry of Transport, Te Puni Kokiri, The Treasury, the Department of Internal Affairs, the Department of Conservation, the Department of Statistics. The Energy Efficiency and Conservation Authority (EECA) and Local Government New Zealand have also been consulted in the development of this paper.

Treasury Comment

Changes to policy on incentivising forest sinks

70. Treasury does not consider that officials have done enough work to advise Cabinet on which particular sinks incentivisation methods should be adopted. Therefore we do not support asking Cabinet to agree to any specific sink incentivising method ahead of Cabinet receiving advice on how many additional sinks the Government should incentivise and a thorough assessment of all potential methods for incentivising sinks against agreed criteria.

71. Treasury does not consider that the advantages of raising the deforestation cap from 5% to 10% outweigh the disadvantages and therefore does not support the proposal.

SPECIFIC MÄORI /TREATY OF WAITANGI ISSUES

72. Treaty of Waitangi and Maori issues associated with this preferred policy have been summarised in CAB MIN (02) 13/10.

73. The preferred policy package directly addresses many of the issues raised by Maori in the initial round of consultation in November 2001. The proposal in this paper to raise the deforestation cap directly addresses a further significant concern of Maori raised in the recent consultation round. Officials' view is that this is likely to reduce the risk of contemporary Treaty claims. The proposal to incentivise permanent protection forests was also strongly supported by Maori.

FISCAL IMPLICATIONS

74. Fiscal implications of the forward work programme to develop the detail for these polices is estimated at $6.124 million (GST inclusive) with 20 FTEs. This will require new funding in 2002/03 of $4.130 million. A break down of this figure is set out in paper III of this series.

75. The actual fiscal implications of the costs of implementing the different policies are uncertain although a greater degree of specificity will be provided when officials report back, initially by the end of November, with the details of the different policies. Any fiscal implications will be closely related to decisions taken on how to use sink credits and emission units, emissions charge design and revenue recycling policy. Fiscal implications will need to take account of the fact that New Zealand will be a net seller of emission units during the first commitment period, which will have a positive fiscal impact. The policies that are likely to have additional fiscal implications once implemented are as follows:

- Projects – the fiscal impact depends on whether emission units or cash are provided and how these are accounted for. There are also costs associated with administering the Projects fund, particularly project assessment costs. A proposal for funding the first year of the Project regime will be submitted in the 2003 Budget. … Further work will be required to determine the actual level that is sought. The level of funding for Projects that would be sought for beyond the 2003/04 financial year is likely to be determined by the success and experience of the first year of the Project regime
- Negotiated Greenhouse Agreements – researching and negotiating NGAs
- Design and implementation of an emissions charge
- Sinks incentivisation policies – the fiscal impact depends on whether sink credits or cash are provided and how these are accounted for. There are also costs associated with administering sinks incentivisation schemes. There is likely to be significant variability in the costs involved. An assessment will be provided once preferred methods have been identified for implementation
- Fiscal liabilities will also arise from the requirement to pay for emissions above the 1990 target from 2008-12
- Operation of non-price policy including opportunity cost of use of emission units
- Systems for collection and administration of an emissions charge and the management of emission units
- Second round impacts on the Crown including:
  - impact on company and personal income tax revenues
  - SOE dividends, and
  - price level related increases in social welfare benefit payments and the cost of operating crown entities and departments.

76. The raising of the deforestation cap does not change the liability that would appear in the Crown accounts, as actual deforestation rates are not expected to be affected. However, the higher cap does expose the Crown to a greater fiscal risk.

LEGISLATIVE IMPLICATIONS

77. Legislation may be necessary to enable the policies set out in the preferred policy package. Officials will report back on necessary legislation when they report back on the detail of policies by mid November 2002.

RECOMMENDATIONS

It is recommended that Cabinet:

1. **note** that stakeholders generally supported the preferred policy approach agreed to by Cabinet on 20 April 2002 [CAB Min (02) 13/10 refers], although some businesses, farmers and farm foresters expressed concern about the time of ratification, emissions charge and the Government's intention to retain sink credits.

2. **confirm** the policy for meeting New Zealand's obligations under the Kyoto Protocol with the following changes or clarifications to the relevant Minutes of CAB Min (02) 13/10:
    - 2.1. **agree** that the deforestation cap be increased to 21 million tonnes of CO_2 equivalent or approximately 10% of the area of forest reaching maturity during the first commitment period (Minute 24).
    - 2.2. **agree** that in the event that significant deforestation is likely to occur at levels above expectations the Government will consider its policy options to manage emissions within the cap, including addressing issues such as:
        - how deforestation rights within the cap will be allocated
        - how to monitor and enforce the deforestation cap
        - what actions the Government will take in the event the cap is exceeded (Minute 24).
    - 2.3. **agree** that there should be a mechanism to encourage the establishment of permanent protection forest sinks by allowing land owners to receive returns in proportion to the carbon sequestered, provided landowners consent to protect the land and maintain a permanent forest cover and are subject to all costs and risks associated with the mechanism (Minute 26).
    - 2.4. **agree** that the design principle for the emissions charge is that it will include: emissions from fossil fuel supply and use; process emissions and fugitive energy emissions, subject to feasibility and cost-effectiveness, unless these emissions are exempted in whole or in part (or receive an equivalent rebate) through a Negotiated Greenhouse Agreement (Minute 9).
    - 2.5. **note** that further work is required to determine whether the emissions charge will be applied to emissions from domestic bunker fuels used in shipping and aviation and officials will report back on the outcome of this work by mid February 2003.
    - 2.6. **note** that further work on the design and application of the emissions charge will be undertaken including legislative requirements.
    - 2.7. **agree** the following policy for synthetic gases:
        - 2.7.1. voluntary handling, education and recovery programme for refrigeration and insulation uses of HFCs and PFCs, linked with Montreal Protocol programmes (Minute 17)
        - 2.7.2. no requirements for HFCs in aerosols, including aerosol cans, asthma puffers and fire extinguishers, for health and safety reasons (Minute 17).
        - 2.7.3. industry will work together and share information to limit leakage of SF_6. A full industry proposal will be provided to Government by mid February 2003 (Minute 18).

3. **note** that further work will be undertaken, in consultation with the Minister of Commerce and Minister for Small Business, on any further policy that may be

required to encourage small and medium size businesses to participate in emissions reduction and whether additional policy is needed to mitigate possible effects on small businesses of an emissions charge.

4. **note** that papers II, III and IV of this series set out further details, work programmes and budgets for developing and implementing the elements of the policy.

5. **note** that the policy package provides a framework and it will be important to regularly review and continue to monitor innovative policy measures in other jurisdictions and assess how these may be relevant to New Zealand

6. **invite** the Convenor of the Ministerial Group on Climate Change to publicly announce the confirmed policy approach.

7. **authorise** New Zealand ratification of the Kyoto Protocol, if possible by the next UNFCCC Conference of the Parties (COP8) in mid to late-October but subject to enactment of the Climate Change Response Bill.

8. **direct** officials to report back on the WTO implications of policies as design details are developed.

Hon Pete Hodgson
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