

The Chair
Cabinet Policy Committee

Annual Report on Climate Change Policy Implementation

- 1 To report progress on the implementation of government's climate change policy as required by CAB Min (02) 26/16 (7 October 2002). This report covers the period since the preferred policy package was approved in October 2002. [sentence withheld under the OIA s. 9(2)(f)(iv)]

Executive Summary

- 2 Progress on implementation of NZ's climate change policy is presented, including progress on price-based measures (Negotiated Greenhouse Agreements, projects to reduce emissions and the carbon charge). Progress was also made on non price sector based policies (agriculture, forestry, small and medium enterprises, business opportunities, local government and synthetic gases). This was underpinned by a public awareness and education campaign, development of a carbon accounting system, international partnerships with Australia and the United States of America, inventory reporting and foundation policies including a waste strategy, National Energy Efficiency and Conservation Strategy (NEECS), a transport strategy and the Growth and Innovation Framework.
- 3 NZ's emission inventory shows a 21.6% increase above the 1990 levels. The largest increases come from agricultural methane from dairy cows (65%), nitrous oxide from agricultural soils (28%), transport (61%), and electricity generation (38%). Nitrogenous fertiliser use has increased five fold from 1990 and 21.3% from 2001. Agricultural sector emissions have been offset by decreases from other livestock classes.
- 4 The increases in NZ's emissions indicate that while policy development is well advanced, policy implementation and the results of such implementation are still at an early stage. In addition, changes in the underlying economic activities (eg: sheep vs diary farming) and the complexities of some sectors (eg: transport) have significant effects on NZ's emissions profile and the rate in which emissions can be influenced.
- 5 The projection of NZ's net position of emissions has been revised and estimates a surplus of 33 million tonnes of CO₂ equivalent for the first commitment period of the Kyoto Protocol (2008-2012).
- 6 The information in this paper will be publicly released in May 2004.
- 7 The next annual report is due 15 May 2005.

Background

- 8 It is widely recognised that the increasing amount of human-caused emissions of greenhouse gases in our atmosphere is the reason the earth is warming at an unprecedented rate. The global mean temperature has increased about 0.6°C between 1861 and 2000. The world's 10 warmest years have all been since 1983, seven of them since 1990. The projections of future global temperature rises range from 1.4 to 5.8°C over the next 100 years, depending on future greenhouse gas emissions.
- 9 Climate change is a global issue and New Zealand is a part of the global response to climate change. The UN Framework Convention on Climate Change (UNFCCC) reached its 10th anniversary in March 2004. The objective of the Convention is to achieve stabilization of greenhouse gas concentrations at a level that would prevent dangerous human-induced interference with the world's climate system. The Convention is approaching universal membership with 188 governments now ratifying it, including all New Zealand's major trading partners.
- 10 In 1997 the Kyoto Protocol built on the Convention's concerns and principles and added new commitments which are stronger and more complex. These new commitments are only applicable to developed countries. The New Zealand Government ratified the protocol in December 2002.
- 11 Through New Zealand's commitment to the UNFCCC, the Kyoto Protocol, and the government's domestic policy objectives, the climate change policy implementation programme aims to ensure the economic and social gains to New Zealand are maximised and risks minimised in what we do internationally and domestically.

Overview of Government's Climate Change Response

- 12 The Government's goal is to enable New Zealand to make significant greenhouse gas reductions on 'business as usual' and be set towards a permanent downward path for total gross emissions by 2012, and to manage risks and opportunities arising from the effects of climate change.
- 13 Climate Change initiatives focus on:
 - Lowering New Zealand's greenhouse gas emissions and ensuring this is done in a way that seeks to keep compliance costs low and investment in this area return the maximum gains;
 - Ensuring that New Zealand is able to position itself to maximise the gains from developing a low carbon and energy efficient economy;
 - Maximising the potential benefits to the economy through the value of carbon sequestration and minimising risks and liabilities to the Crown;
 - Ensuring that climate change induced risks to our primary production sectors, human settlements and infrastructure (e.g. extreme weather events) are understood and can form a part of private and public sector decisions;
 - Ensuring that climate change science and policy is communicated to the public and sector groups in a way that enables them to take actions that support the overall goal of government climate change policy;

- Participating in international fora to further New Zealand’s climate change policy objectives.
- 14 The climate change policy package includes both price-based and non price-based measures. The key component of the price-based measures is an emissions charge that is to be introduced not before 2007 and set at the world price for carbon, but not above NZ\$25 a tonne of carbon dioxide equivalent.
- 15 Negotiated greenhouse gas agreements were introduced to address competitiveness-at-risk issues through relief from the emissions charge in exchange for adoption of a pathway to world’s best practice in emissions management in the firm.
- 16 The Projects to Reduce Emissions mechanism encourages greenhouse gas abatement through increase of renewable energy sources, energy efficiency, and fuel switching in exchange for a promise from the Government of emission units that have a value and can be traded.
- 17 A range of broad non price-based measures were introduced such as the development of business opportunities and public awareness. Non-price-based measures focusing on particular sector emissions were also introduced to encourage emissions reduction and adaptation to the effects of climate change. Specific sectors identified include the:
- Agriculture sector;
 - Forestry sector;
 - Local government;
 - Small and Medium Enterprises;
 - Synthetic Gas Users.
- 18 The Government has implemented specific climate change policies and is currently developing further initiatives to meet the climate change objectives. Detailed progress reports on each of these polices are contained in: **Annex 1** – progress on the implementation of climate change policies, and **Annex 2** – progress on the development of further climate change policies.
- 19 In addition to the climate change initiatives currently being implemented or developed, there are several foundation strategies already in existence that support the Government’s climate change objectives. These strategies include the:
- National Energy Efficiency and Conservation Strategy;
 - New Zealand Waste Strategy;
 - New Zealand Transport Strategy;
 - Growth and Innovation Framework.
- Details on the progress of these strategies are contained in **Annex 3**.

Overview of Climate Change Accomplishments To-Date

- 20 Key accomplishments detailed in this report include:
- The establishment of the **New Zealand Climate Change Office** which is now fully operational and located in the Ministry for the Environment

which works in a whole of government way with officials from The Treasury, the Ministry of Economic Development, the Ministry of Agriculture and Forestry, the Ministry of Foreign Affairs and Trade, the Department of Prime Minister and Cabinet, the Ministry of Transport, the Energy Efficiency and Conservation Authority, Te Puni Kokiri and the Ministry of Research, Science and Technology;

- The framework and guidelines for **Negotiated Greenhouse Agreements** finalised and implemented resulting in 12 firms applying for priority negotiations representing approximately 55% of electricity used by New Zealand industries. To-date, 1 agreement has been completed (New Zealand Refining Company) and another 3 negotiations have commenced;
- **Projects to Reduce Emissions** including early projects and the first tender round completed resulting in:
 - The development of Meridian's Te Apiti wind farm and the extension of Trustpower's Tararua wind farm being granted emissions units.
 - First round tender resulted in 46 tenderers seeking 15 million emission units being received for the 4 million emission units on offer. The 15 successful projects include thirteen electricity and two non-electricity projects such as wind farms, cogeneration, bioenergy, landfill gas, small hydro, geothermal existing hydro enhancements and industrial heat plants.

If implemented, all these projects could achieve up to 365 MW of additional electricity generation capacity. This is equivalent to about 2 years of growth in electricity demand and including biomass for co-generation represents approximately 5.4 petajoules (PJ) per annum of renewable energy (just below one fifth of the 30 PJ renewable energy target under the National Energy Efficiency and Conservation Strategy).

- **Agricultural Research Memorandum of Understanding** signed with eleven key agricultural sector participants. The MoU implements an agricultural research strategy for methane and nitrous oxide gases and provides for industry funding totalling \$4.7 million. Significant input from the agriculture sector and other government departments was required to successfully negotiate the MoU. The proposed agriculture research levy was withdrawn on signature of the MoU;
- **Forestry Industry Framework Agreement** has been drafted. The proposed FIFAs contains policies and programmes relating to transport, bio-energy, forest management and health, labour and skills and market access. Budget bids have been made to fund these initiatives and further consultation with the industry will occur before budget announcements are made;
- **Public awareness and education campaign** commenced with phase 1 "4million careful owners" now completed. There was strong media coverage in all key news media including television news, radio interviews and print stories, in addition to over 80 percent of New Zealanders 18 years+ exposed to radio, print and online advertising messages over a six week period;

- Development of **Local Government programmes** that cover 3 elements:
 - a greenhouse gas emissions **reduction (mitigation) programme** focusing on reducing emissions for both councils' and their communities. The programme is ready for roll-out in May 2004. The three year 'Communities for Climate Change Protection' programme will assist local authorities to develop emission inventories, targets for emission reductions, action plans for achieving these, and to monitor progress towards targets;
 - an **adaptation programme** that has developed a range of information materials on the impacts of climate change and how councils' can adapt to and plan for climate change;
 - a partnership with **Local Government New Zealand**. The partnership will deliver communication and consultation with councils', peer review and dissemination of adaptation guidance materials, management of the mitigation programme, and climate change workshops/training sessions.
- **The Resource Management (Energy and Climate Change) Amendment Act 2004** has been enacted. The Act removes local authorities ability to consider the effects on climate change when considering discharges into air of greenhouse gases. It also provides for local authorities to take into account the effects of climate change as well as encouraging renewable energy and energy efficiency;
- Development of the **New Zealand Carbon Accounting/Monitoring System (NZCAS)** principally designed for carbon monitoring and reporting to meet NZ's international climate change obligations and management of its domestic policies. The NZCAS can also help meet some of the other international reporting needs of government and assist other parts of central and local governments in meeting other environmental objectives;
- **International climate change partnerships** formed with the Governments of Australia and United States of America resulting in over 30 inter-governmental projects commencing;
- **Synthetic gases:** Sulphur Hexafluoride (SF₆) MoU drafted. The MoU requires industry to adopt best practices that minimise SF₆ emissions when installing, maintaining and retiring equipment. In exchange, the industry will be exempt from the emissions charge for these gases. In addition, work is progressing with the refrigeration and air-conditioning industries to reduce Hydrofluorocarbon and Perfluorocarbon emissions;
- On time delivery to the UNFCCC of the 2003 and 2004 **greenhouse gas inventory** (relating to the years ending 2001 and 2002 respectively);
- **International:** The completion of the "rules" at COP9 in Milan, under which the Kyoto Protocol will operate. Officials have continued to monitor international developments that affect the coming into force of the Kyoto Protocol, future negotiations and developments in the emerging carbon market;
- **Waste Strategy:** Completion of a review of the targets in the waste strategy. The review indicates that local government has made good

progress in setting local and regional targets consistent with the national targets;

- **Methane from landfills:** Progress has been made on the national environmental standard that defines, at a national level, the greenhouse gas control requirements from landfills;
- **Renewable fuels:** The regulatory barrier preventing ethanol /petrol blended fuel has been removed, allowing for up to 10% ethanol/petrol blend being able to be sold;
- Progress on policy development in areas such as the design of the emissions charge, the registry for individual carbon accounts, the permanent forest sinks mechanism, small and medium size enterprises, and business opportunities.

21 In addition, a summary table detailing the stages of policy development and implementation and the 2004 work programme is contained in **Annex 4**.

Overview of New Zealand's Greenhouse Gas Sources and Movements

22 New Zealand's total greenhouse gas emissions in 2002 equalled 74.9 million tonnes of CO₂ (Mt CO₂) equivalent and were 21.6% above the 1990 level. Total emissions rose 1.8% from 2001. The agriculture sector produced 49.2% of total emissions in 2002, and the energy sector produced 42.8% of the total.

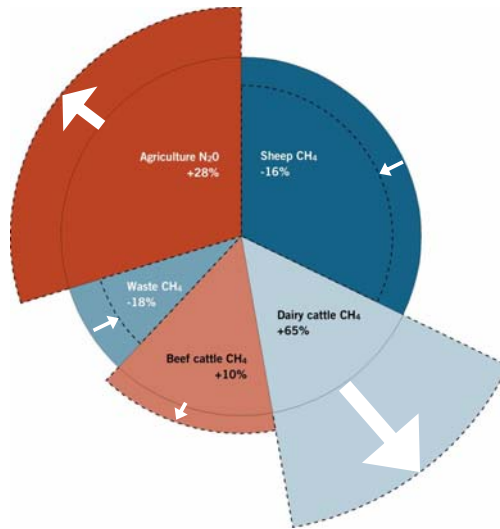
23 An overview of the 2002 greenhouse gas emissions profile is as follows:

	Total emissions (Mt CO ₂ equivalent)	Percentages
Agricultural sector emissions	36.9	49% of total
Agricultural soil emissions (N ₂ O)	12.6	34% of sector
Sheep (CH ₄ from enteric fermentation)	9.1	25% of sector
Dairy cattle (CH ₄ from enteric fermentation)	8.3	22% of sector
Beef cattle (CH ₄ from enteric fermentation)	5.4	15% of sector
Other	1.4	4% of sector
Energy sector emissions	32.0	43% of total
Transport	14.2	44% of sector
Thermal electricity generation	5.5	17% of sector
Manufacturing industries and construction	6.4	20% of sector
Other	5.9	18% of sector
Waste sector emissions	2.4	3% of total
Industrial processes & solvent emissions	3.6	5% of total
Total Emissions	74.9	100%

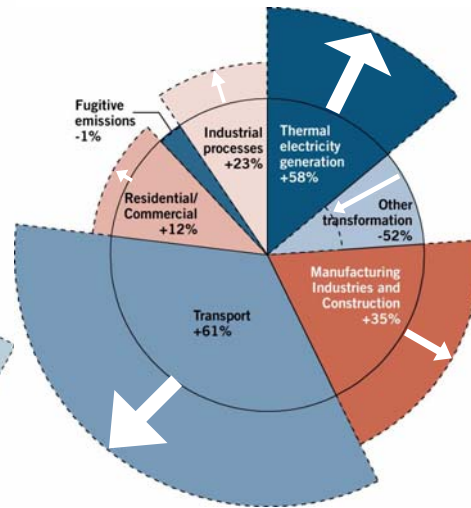
24 In 2002 New Zealand's greenhouse gases comprised 45 % carbon dioxide, 37%, methane and 18% nitrous oxide. The sources of those greenhouse gases were primarily from the agricultural sector (methane and nitrous oxide) and the energy sector (mainly CO₂). Emissions of HFCs, PFCs and SF₆ together are less than 1% of the total.

- 25 The pie charts below show the relative size of the emissions from the agriculture, waste, and energy sectors and the change in the emissions between 1990 and 2002. The most significant changes are:
- Agriculture sector - the large increase of methane emissions from dairy cows (about 65%), the increase in nitrous oxide emissions from agricultural soils (about 28%), and the decrease in methane emissions from sheep (about 18%);
 - Energy sector - the large increases in the transport sector (61%), thermal electricity generation (58%) and manufacturing industries and construction (35%);
 - Waste sector – emissions from the waste sector are about 18% below the 1990 level.

Methane and nitrous oxides emissions from the agriculture and waste sectors in 2002 and percentage change since 1990



CO₂ emissions from the energy and industrial processing sectors in 2002 and percentage change since 1990



- 26 Note that in the Energy sector emissions, the sector labelled as “Residential/Commercial” also includes Institutional/Forestry/Fishing/Agriculture direct use of fossil fuels, but any transport emissions from these sectors is picked up under transport. Similarly, emissions from the sector labelled “Manufacturing Industries and Construction” (which includes methanol and ammonia/urea production) covers direct use of fossil fuels by this sector and does not include any transport emissions.
- 27 Reporting of net CO₂ removals in the Land Use change and Forestry sector includes both pre-1990 and post-1990 forests. In 2002 planted forest sinks have removed 24.3 Mt CO₂, 11% more than in 1990.
- 28 In 2003, the methodologies for estimating agricultural methane and nitrous oxide emissions were improved to meet the good practice guidance requirements of UNFCCC and Kyoto Protocol inventory reporting. 2004 saw the completion of a review of the emission factors used in the energy sector calculations, and any changes incorporated into the inventory. The greenhouse

gas inventory data will continue to be revised and improved as better information and further good practice guidance becomes available.

- 29 Changes to the agriculture sector methodologies, which reflect increases in animal performance, resulted in lower emissions from the agriculture sector in 1990, and lower projected emissions to 2012 than had been previously reported. Changes in the energy sector calculations have an overall impact of less than 1% on energy sector emissions.

Change in New Zealand’s Projected Net Emissions

- 30 The projection of NZ’s net position of emissions has been revised and estimates a surplus of 33 Mt CO₂ equivalent for the first commitment period of the Kyoto Protocol (2008-2012). The revised projection is developed from projected total greenhouse gas emissions and projected removals and emissions from land use change and forestry.
- 31 Greenhouse gas emissions projections have been updated since last reported to the UNFCCC in 2001 that estimated a surplus of 56 Mt CO₂ equivalent. The update incorporates realised outcomes and changes in expectations for key drivers (such as GDP and population) and also includes improved certainty with respect to outcomes for major projects such as the shelving of project Aqua.
- 32 A summary of New Zealand’s revised net position is as follows:

	2004 data Mt CO₂ equivalent
Total projected emissions 2008 - 2012	399
NZ’s assigned amount ¹	298
Assigned amount balance less projected emissions	-101
Impact of Policies (Including projects)	39
Excess emissions over assigned amount	-62
Total sink credits 2008 to 2012	95
NZ’s net position (excess sink credits)	33

¹ NZ assigned amount balance is 308 less an estimate of 10 million units to be allocated to projects.

- 33 The most significant sources of change in the projections for 2008-2012 are due to an increase in projections of business as usual growth in agricultural emission of 16 Mt CO₂ equivalent, and a reduction in the estimate of sinks credits of 10 Mt CO₂ equivalent.

Consultation

- 34 This paper has been prepared in consultation with senior officials from The Treasury, the Ministry of Economic Development, the Ministry of Agriculture and Forestry, the Ministry of Foreign Affairs and Trade, the Department of Prime Minister and Cabinet, the Ministry of Transport, the Energy Efficiency and Conservation Authority, Te Puni Kokiri and the Ministry of Research, Science and Technology.

Publicity

- 35 It is proposed that a press release will be made on progress with policy implementation, the latest inventory update and an update of NZ's net position in May 2004.

Recommendations

- 36 It is recommended that the Committee:
- a) **Note** progress made in implementing the New Zealand climate change policy;
 - b) **Note** that the Projects that Reduce Emissions resulted in two early projects and the first tender round delivering fourteen signed up projects to date, and could achieve up to 365 MW of new electricity generation equivalent to two years' growth in electricity demand and just under one fifth (5.4 PJ) of the 30 PJ renewables target under the NEECS;
 - c) **Note** that one Negotiated Greenhouse Agreement has been agreed, that three more are at negotiation stage and twelve applications for priority negotiations have been received to date;
 - d) **Note** that the agriculture sector has agreed through an MoU to invest \$4.7m of industry funding for research on agriculture non-CO₂ emissions research;
 - e) **Note** that a public awareness campaign "4million careful owners" was completed;
 - f) **Note** that the Resource Management (Energy and Climate Change) Amendment Act 2004 has been passed;
 - g) **Note** that two successful partnerships have been signed with the US and Australian governments resulting in thirty inter-governmental projects commencing;
 - h) **Note** that a partnership with Local Government New Zealand has been agreed and a local government greenhouse gas emission reduction (mitigation) programme agreed and ready for roll-out in May 2004;
 - i) **Note** an MoU has been drafted with industry on synthetic gases for their management and reduction;
 - j) **Note** the completion of two successful inventory reviews;
 - k) **Note** that a Forestry Industry Framework Agreement is drafted and a package of budget bids to be announced in the Budget 2004/05;
 - l) **Note** the review of waste strategy targets and the progress in setting local and regional targets consistent with the national targets;
 - m) **Note** progress on the national environmental standard that defines the greenhouse gas control requirements from landfills;
 - n) **Note** the removal of the regulatory barrier preventing ethanol/petrol blended fuel;
 - o) **Note** that the key information contained in this report will be publicly released on the NZCCO web site;

- p) **Note** the revised projection of NZ's net surplus of emissions for the period 2008-2012 is estimated at 33 Mt of CO₂ equivalent;
- q) **Note** that the next Annual Report will be submitted by 15 May 2005 and will include an updated annual inventory of greenhouse gases and an annual update of NZ's projected net emissions.

Hon Pete Hodgson
Convenor, Ministerial Group on Climate Change

Progress on implementation of climate change policies

Negotiated Greenhouse Agreements (NGAs)

- 1 Firms or industries that as a result of an emissions charge, face significant risk to their competitiveness relative to producers in countries with less stringent climate change policies can apply for an NGA. Under an NGA, firms would receive full or partial exemption from the emissions charge in exchange for moving towards world's best practice in emissions management.
- 2 An early NGA with the New Zealand Refining Company (NZRC) was concluded in April 2003. This allowed a decision to be taken by NZRC on essential investment for the production of cleaner fuels from the Marsden Point refinery. NZRC has advised that the project is on track to start in 2005.
- 3 Cabinet agreed the final policy for NGA's on 9 April 2003, and application guidelines and a call for applications were disseminated in June 2003. Applications for priority negotiations were received from twelve firms. These firms generally covered the expected range of major New Zealand energy users and represents approximately 55 percent of electricity used by New Zealand's industry. At the end of March 2004, the status of applications were as follows:
 - The following seven firms had passed the eligibility test and had been invited to negotiate. Negotiations have commenced with three of these firms. Negotiations have proceeded to the stage of consultants being engaged to provide advice on world's best practice in emissions management. Initial discussions have taken place with two further firms to determine the scope and process for negotiations;
 - ACI Glass Packaging
 - Carter Holt Harvey
 - Newmont Waihi
 - New Zealand Aluminium Smelters – *commenced negotiations*
 - Norske Skog Tasman – *commenced negotiations*
 - OceanaGold (previously GRD Macraes) – *commenced negotiations*
 - Silicon Metal Industries
 - Draft consultants' reports on eligibility for three firms have been received prior to recommendations being made to joint Ministers;
 - Final information is still required for the remaining two firms.
- 4 Interest has also been expressed by three sectoral organisations representing shipping, meat, and glasshouse vegetable producers, and from one further firm.
- 5 The process for NGAs is now well underway. The guidelines and model agreements were completed by July 2003 and are being used. By end of June 2004, officials hope to have completed or substantially completed two NGA's and have at least four others underway.

6 [withheld under the OIA s. 9(2)(j)]

7 [withheld under the OIA s. 6 (e)(vi)]

Projects to Reduce Emissions

- 8 Projects to reduce emissions contributes to New Zealand meeting its Kyoto Protocol emissions obligations by providing incentives for projects that reduce emissions below business as usual during the Protocol's first commitment period (2008-2012).
- 9 Two early projects were granted eligibility for emissions units on 17 February 2003 - Trustpower's Tararua wind farm Stage 2 and Meridian's Te Apiti wind farm development. Final texts of the agreements were signed in December 2003. Tararua Stage 2 delivered its first output in December 2003 and is expected to be fully operational by winter 2004. Te Apiti could deliver some generation by the end of 2004 and should be fully operational by winter 2005. These projects will add 125 MW to New Zealand's electricity generation capacity or about 440 GWh (1.6PJ) per annum to generation.
- 10 The details and process mechanism for the Projects to reduce emissions was agreed by Cabinet on 23 March 2003. NZCCO established an implementation team for the first Projects tender round in mid-2003 and applications were called for proposals in mid-September. Final decisions on 15 successful tenders were made on 4 December and 14 project agreements are now signed. There were 46 tenderers seeking 15 million emission units. The successful projects sought 3.99 million emission units out of the total of 4 million units allocated for the round in the 2003/04 Budget. These projects offer emissions reductions of 4 million tonnes of CO2 equivalent. [sentence withheld under the OIA s. 9(2)(j)]
- 11 This was a successful first tender round. The number of projects submitted exceeded expectations. Successful projects, if implemented would add 1484 GWh or 240 MW to New Zealand's electricity generation capacity. The two early projects and the first tender round potentially add up to 5.4 PJ per annum to the renewable energy target under NEECS (this includes biomass for co-generation) representing just below one fifth of the NEECS target of 30 PJ by 2010 and is equivalent to about two years of growth in electricity demand.
- 12 A report of the first tender round outcomes was completed and reported to Cabinet in April 2004.
- 13 Meridian Energy's 90MW Te Apiti wind farm was offered a contract to sell the emission units from its early Project Agreement to the Netherlands Government. [sentence withheld under the OIA s. 6(b)(i)]

International trading linkages

- 14 Officials are exploring linkages between the allocation of emissions units in New Zealand and emerging emissions trading systems internationally. The European Union Emissions Trading Scheme (EU ETS) is expected to come into force from January 2005 and is not conditional on the entry into force of the

Kyoto Protocol. The EU ETS is an industry/firm emissions trading scheme, currently being voted on within the European Union, and could involve governments. The EU ETS offers a new and substantial market into which New Zealand based emissions units may be sold.

- 15 Officials are also exploring linkages with other EU member states and are in discussion with:
- the Netherlands Government on how projects awarded emissions units under the Projects programme could make best use of the Netherlands tender process; and
 - the European Commission to ensure that access of New Zealand project-based units into the EU ETS is maximised.

Agricultural Non-CO₂ Emissions Research

- 16 The Government sought a voluntary increase in research expenditure on non-CO₂ agricultural greenhouse gas emissions; otherwise the Government would compulsorily levy the industry. From July to November 2003 discussions were held but industry representatives rejected the Government's proposal for a Voluntary Scheme. Following the industry's rejection of a levy approach, a Memorandum of Understanding was eventually signed by the Government and the agricultural sector to implement the agricultural sector's research strategy and to formalise the relationship between the Government and agricultural sector organisations that are parties to the Pastoral Greenhouse Gas Research Consortium (PGGRC). The total level of industry funding under the agreement is \$4,701,375 including GST.
- 17 The industry's research strategy is coordinated on behalf of the industry by the PGGRC. The Government has now rescinded previous decisions relating to a compulsory research levy given the industry's willingness to now voluntarily fund this research.
- 18 The research strategy of the PGGRC will be monitored by officials over time to ensure continued research effort and management of the Government's interest. The PGGRC will report to the Government annually. It is expected that the outcomes of the research will be able to be integrated into the normal management regimes on farms and through identifying with the farming community ways of transferring technology. Future challenges include ensuring the uptake of technologies that are developed and to build understanding and support amongst farmers for climate change research. The latter understanding will be built through ongoing information provision to the farming community following the completion of phase 1 of the Climate Change Public Awareness and Education campaign early in 2004.

Forest Industry Framework Agreement

- 19 The main elements of the Government's preferred policy package for forestry, announced in October 2002 is that:
- for Kyoto Forests (post 1990 forests) the Government will retain all sink credits and their associated liabilities, at least for the first commitment period;

- the Government will retain deforestation liabilities, provided these remain within a cap equal to 21 million tonnes of CO₂ equivalent, i.e. the carbon that would be released by the deforestation of 10% of the area of forest reaching maturity during the first commitment period;
 - the Government assign a proportion of the credits (or an equivalent value) to provide incentives for the establishment and enhancement of forest sinks;
 - 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.
- 20 In recognition of the forest sector's role in creating forest sink credits, the Government agreed to develop a "Forest Industry Framework Agreement" (FIFA) with the sector. The proposed FIFA, although not yet signed, contains policies and programmes relating to transport, bio-energy, forest management and health, labour and skills and market access. Budget bids have been made to fund these initiatives and the industry will now consult on its acceptance of the FIFA package.
- 21 The Memorandum of Understanding between the Government and the forest industry remains unsigned, pending industry analysis of the budget outcome. Both parties have publicly acknowledged that progress is being made.
- 22 Although the forest industry's main interest is in the quantum of the final FIFA package, it has indicated that resolving issues around the deforestation cap (see Annex 2) is perhaps a key plank in the package.

Local Government

- 23 The Government has recognised the significant role of the local government sector in delivering New Zealand's climate change response. The NZCCO local government programme covers 3 elements:
- Mitigation – reducing greenhouse gas emissions in council activities and their communities;
 - Adaptation – assisting councils to adapt to the effects of climate change (eg: rising sea levels);
 - Partnership – a mechanism to deliver both mitigation and adaptation outcomes.

Local Government Greenhouse Gas Emissions Reduction (Mitigation) Programme

- 24 On 29 April 2002, Cabinet noted progress towards developing a New Zealand voluntary greenhouse gas reduction programme in partnership with local authorities, and directed officials to report back to Cabinet on the final proposal for the programme, including programme costings, by 31 July 2003 (CAB Min (02) 13/11 / Climate Change III: The Role of Local Government). The following update provides that report back.

- 25 Bids to deliver the New Zealand programme were sought via an open tendering process. Following a subsequent closed tender process, assessment rounds were completed and a provider for the programme was selected.
- 26 A 3 year "**Communities for Climate Protection**" (CCP) programme in partnership with the International Council for Local Environmental Initiatives and interested local authorities is the preferred approach for delivery of a voluntary greenhouse gas reduction programme in New Zealand.
- 27 CCP is a world-wide programme benefiting from international best practice and experience. It focuses on assisting local authorities to develop emission inventories, targets for emission reductions, action plans for achieving these, and to monitor progress towards targets. It has proven successful in a number of countries (e.g. Australia) by reducing greenhouse gas emissions by improving energy efficiency and conservation, increasing sustainable transportation, enhancing urban design, and reducing landfill emissions.
- 28 CCP will build on the EECA's EnergyWise Councils Partnership, which focuses on energy efficiency. It is anticipated that five councils will be recruited into the programme during the first year, with a further ten joining each year until a maximum of 25 councils are programme participants. [sentence withheld under the OIA s. 9(2)(b)(ii)]. The programme will be regularly reviewed against performance indicators, with a decision on continuation of the programme beyond three years dependent on satisfactory performance.

Local Government Adaptation Programme

- 29 The RMA (Energy and Climate Change) Amendment Act encourages councils to plan for the effects of climate change. NZCCO has given priority to the provision of guidance to councils on the effects of climate change.
- 30 NZCCO has worked with scientists and council staff to develop guidance materials for local government which identify national and regional climate change effects and provide technical support and advice as to how councils can adapt to these in their day-to-day planning, hazard and asset management, investment, and consent activities. Guidance material will be ready in May 2004. Training and information programmes for elected representatives, technical, financial and policy and planning staff within council covering both mitigation and adaptation is expected to be developed later this year.

Partnership

- 31 To date, NZCCO has developed a partnership with the local government sector to deliver climate change outcomes and have provided:
- consultation with councils on the climate change policy package;
 - surveys about the existing levels of climate change awareness and activity within councils;
 - provision of information via workshops/seminars about climate change science and its likely effects (including at the regional level);

- provision of guidance to councils on developing a greenhouse gas inventory;
 - on-going development of guidance materials to assist local authorities to better take into account/adapt to the effects of climate change in their day-to-day operations.
- 32 In April 2004, the NZCCO reached agreement with Local Government New Zealand (LGNZ) on a formal climate change partnership with the sector. The partnership provides for LGNZ assistance with; communication/ consultation with councils, peer review and dissemination of adaptation guidance materials, management of the mitigation programme, and climate change workshops/training sessions.

Resource Management (Energy and Climate Change) Amendment Act

- 33 The Resource Management (Energy and Climate Change) Amendment Act came into force in March 2004. It reflects the Government's preference for national coordination of controls on greenhouse gas emissions (via national Climate Change Policy measures, including the proposed carbon charge), and gives greater emphasis to climate change and energy matters in RMA planning and decision making.
- 34 The Act provides for all persons exercising functions and powers under the Resource Management Act to have particular regard to:
- the effects of climate change;
 - the efficiency of the end use of energy;
 - the benefits to be derived from the use and development of renewable energy.
- 35 The Act also specifically requires local authorities:
- to plan for the effects of climate change; but
 - not to consider the effects on climate change of discharges into air of greenhouse gases.
- 36 EECA, MfE and the NZCCO are currently working together to produce information on the Amendment Act, including specific guidance for councils on integrating the Act into everyday decision-making and planning.

Synthetic Gases

- 37 On 7 October 2002, (CAB Min (02) 26/16) Cabinet agreed to the following policy for synthetic gases:
- voluntary handling, education and recovery programme for refrigeration and insulation uses of hydrofluorocarbons (HFCs) and perfluorocarbons (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 sulphur hexafluoride SF₆ (primarily used in the electricity industry). A full industry proposal will be provided to government by mid February 2003.

- 38 Also on 7 October 2002, Cabinet directed officials to report to POL by 28 February 2003 on progress with industry on proposals for managing and reducing synthetic gas emissions (CAB Min (02) 26/18). The following update is intended to provide the report on progress with industry on proposals for managing and reducing synthetic gases.

Management of Sulphur Hexafluoride (SF₆)

- 39 NZCCO received an initial draft proposal on managing SF₆ from industry in the form of a Memorandum of Understanding (MOU) in July 2003. The MOU requires industry to report emissions of sulphur hexafluoride to government and to adopt best practise with respect to minimising SF₆ emissions when installing new equipment, during maintenance, and during retirement of old equipment. In return, government will agree to exempt industry from direct costs arising from climate change policies on SF₆ emissions, i.e. an emissions charge. The MOU will end in December 2012.
- 40 Transpower as the major user of SF₆ in New Zealand has taken responsibility for preparing the MOU on behalf of and in consultation with other SF₆ users. Text has been negotiated between industry participants and the NZCCO and discussed with Treasury, Ministry of Economic Development, Ministry of Foreign Affairs and Trade and Inland Revenue who have commented on the draft. I intend to have the MOU signed by mid 2004.

Management of Hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs)

- 41 NZCCO is building relationships with users of HFCs and PFCs who are primarily in the refrigeration and air-conditioning industries. It is intended to raise awareness and education on these gases and to encourage best practice to reduce emissions. A current project under the Australia/New Zealand Climate Change Partnership is to improve collaboration on management of synthetic gases emissions. Initial focus is on the refrigeration and air-conditioning sectors. A meeting was held in Melbourne in November 2003 which identified some possible areas in which New Zealand and Australia can work together. A further meeting hosted by New Zealand in March 2004 with both industry and officials from New Zealand and Australia has progressed this project.
- 42 Synthetic greenhouse gas emissions not covered by policy for synthetic gases in the climate change policy package are process PFC emissions (e.g. from aluminium smelting). These emissions will be addressed in the design of the emissions charge.

Public Awareness & Education Campaign

- 43 The Government in 2002 agreed to a three phase public awareness and education programme to improve New Zealanders' understanding of environmental issues relating to climate change and to bring about changes in behaviours that will assist in the reduction of greenhouse gas emissions. The public education and awareness campaign has been designed in three phases, with the first phase focusing on reaching out to the public and raising awareness. Phase one of the campaign was launched on December 28 and concluded at the end of February 2004.

- 44 The integrated campaign was designed to prompt debate and move New Zealanders' through the awareness development stage and into action mode. It was fronted by four 'real' New Zealanders'.
- 45 There was strong media coverage in all key news media including television news, radio interviews and print stories, in addition to over 80 percent of New Zealanders 18 years+ exposed to radio, print and online advertising messages over six weeks.
- 46 Research undertaken by NZCCO revealed a strong demand for greater public information and education. It is also clear from research that New Zealanders' want practical advice on how to make a difference to the environment.
- 47 Phases two and three of the programme will build on these messages and move to making a difference through behaviour change.

Science

- 48 The NZCCO provides the national focal point for the Intergovernmental Panel on Climate Change (IPCC). During the year officials have maintained engagement with IPCC activities, including participating in Bureau meetings and plenary sessions of the Panel, and coordinating the two government reviews of the IPCC good practice guidance for land use, land-use change and forestry fundamental to managing the value of New Zealand's carbon credits.
- 49 Officials are currently engaged in the process of nominating NZ authors for the IPCC 4th Assessment Report and for the revision of the IPCC greenhouse gas inventory methodology guidelines. The IPCC conducts regular assessments of climate change science across all disciplines and the 4th Assessment Report will provide the science context for future climate change negotiations and New Zealand participation ensures southern hemisphere issues are factored in.
- 50 New Zealand has also made a contribution to global observing systems and governance structures for the Global Climate Observing System and the Earth Observation System fundamental to the provision of satellite imagery for NZ's carbon accounting system. Officials and New Zealand scientists have also participated in international science initiatives related to the negotiation of future mitigation commitments.
- 51 Work has begun on a stocktake of New Zealand investment in climate change science which will be completed in the first half of 2004.
- 52 Other science input has included the initiation of adaptation guidance for local government, progressing work to understand the economic impacts (including insurance aspects) of extreme climate events in partnership with local government, developing public-interest information on regional impacts of climate change, and climate change impacts guidance for east coast farmers.

Greenhouse Gas Inventory and Carbon Monitoring/Accounting System

- 53 The New Zealand National Inventory Report for the year 2002 was submitted to the UNFCCC secretariat on time (15 April 2004). The data in the report shows

that overall emissions have increased by 21.6% since 1990, and by 1.8% from 2001 to 2002.

- 54 The NZ 2001 inventory report was reviewed by an international team in September 2003. The next submission was submitted on 15 April 2004, using new UNFCCC guidelines.
- 55 In 2002 New Zealand's greenhouse gases comprised 45 % carbon dioxide, 37%, methane and 18% nitrous oxide. The sources of those greenhouse gases were primarily from the agricultural sector (methane and nitrous oxide) and the energy sector (mainly CO₂) Emissions of HFCs, PFCs and SF₆ together are less than 1% of the total.
- 56 The most significant changes between 1990 and 2002 are:
 - Agriculture sector – the large increase of methane emissions from dairy cows (about 65%), the increase in nitrous oxide emissions from agricultural soils (about 28%), and the decrease in methane emissions from sheep (about 18%);
 - Energy sector – the large increases in the transport sector (61%), thermal electricity generation (58%) and manufacturing industries and construction (35%);
 - Waste sector – emissions from the waste sector are about 18% below the 1990 level.
57. Reporting of net CO₂ removals in the Land Use change and Forestry sector includes both pre-1990 and post-1990 forests. In 2002 planted forest sinks have removed 24.3 million tonnes of CO₂, 11% more than in 1990.
58. The New Zealand Carbon Accounting System (NZCAS) includes the collection, storing and analysis of data for carbon reporting under the UNFCCC and Kyoto Protocol. Data will come from a range of sources: indigenous forests, regenerating scrub forests and their soils; soils undergoing land-use change; planted production forests, particularly post-1990 forests; and the areal extent and spatial location of land use and land-use change. Although principally designed for carbon monitoring and reporting for climate change purposes, the NZCAS can also help meet some of the other international reporting needs of government (e.g. Montreal Process, Biodiversity Convention) and assist other parts of central government together with local government in meeting other environmental objectives.
59. The Steering Committee for the NZCAS met for the first time on 29 January 2004. The Department of Conservation, the Ministry of Agriculture and Forestry, Statistics NZ, together with Ministry for the Environment were represented. NZCCO chairs the Committee. Local government is also represented. A technical advisory group has also been established to provide technical and research input to the NZCAS development.

United States and Australia Climate Change Partnerships

60. 2003 saw the agreement of Climate Change Partnerships between New Zealand and both the United States and Australia. These are primarily to build on

existing relationships with these countries in the field of climate change (e.g. research institutions, policy dialogues), to share information and experience on climate change relevant activities, to keep the dialogue open with the range of UNFCCC signatories.

United States-New Zealand Climate Change Partnership

61. Following a visit to New Zealand in July by senior US officials, 26 projects were launched under the United States-New Zealand Climate Change Partnership. These projects were divided into nine priority areas:
 - i. Climate Change Science;
 - ii. Technology Development;
 - iii. Emission Registries and Voluntary Programmes;
 - iv. Greenhouse Gas Accounting in Forestry and Agriculture;
 - v. Engaging with Business;
 - vi. Developing Country Assistance;
 - vii. Climate Change Research in Antarctica;
 - viii. Public Education Initiatives;
 - ix. Product and Process Standards.

62. A progress report of the US-NZ Partnership was prepared in the last months of the year and discussed with the U.S. Under Secretary for Global Affairs, Paula Dobriansky, and her delegation at the 9th Conference of the Parties to the UNFCCC held in December 2003 in Milan, Italy. The last six of the 26 projects should all start in early 2004. Further proposals are under development for discussion with the US in Washington in July 2004.

Australia-New Zealand Climate Change Partnership

63. Australian Environment Minister Dr. David Kemp and I announced the Australia-New Zealand Climate Change Partnership on 7 July 2003. The first set of projects to be included under this Partnership was launched following a Ministerial bilateral at the 9th Conference of the Parties to the UNFCCC. The Partnership has five priority areas that projects are formed under:
 - i. Measuring and Reducing Emissions from the Agricultural Sector;
 - ii. Engaging with Business and Local Government on Technology Development, Policy Design and Implementation;
 - iii. Building on Existing Cooperation on Energy Efficiency;
 - iv. Further Enhancing Climate Change Science and Monitoring;
 - v. Working Together with our Pacific Island Neighbours to Address the Regional Challenges Posed by Climate Change.

64. In addition to these projects, further proposals are currently being developed by both Australia and New Zealand which will be progressively advanced.

65. The partnerships are already proving to be helpful in the implementation of several climate change policies viz. local government, synthetic gases, renewable energy, energy efficiency and under-pinning research in the Southern Hemisphere and leveraged new money from our partners.

Climate Change Response Amendment Bill

66. The Climate Change Response Amendment Bill will amend the Climate Change Response Act 2002 to provide for:
 - Individual accounts in the registry of Kyoto Protocol emission units; and
 - The implementation of a permanent (non harvest) forestry mechanism.
67. NZCCO will provide policy advice and coordination for the Bill's development and progress through Parliament. MED has provided drafting instructions for the Registry Provisions of the Bill and MfE has provided the drafting instructions for the forestry mechanism in consultation with MAF. The Bill has been accepted in the 2004 legislative programme with a priority of 2 (must be passed in the year) and is expected to be introduced to Parliament by July 2004 and enacted by November 2004.

International

68. With officials, I attended the 9th Conference of the Parties (COP9) to the UNFCCC (held in December 2003) which marks the completion of the “rules” under which the Kyoto Protocol will operate.
69. Officials have continued engagement with UNFCCC commitments including:
 - mitigating greenhouse gas emissions;
 - undertaking analysis of and responding to the impacts of climate change;
 - contributing to climate change research and systematic observation;
 - supporting developing countries (particularly Pacific Islands countries) in their response to climate change, both through the Global Environment Facility and through other bilateral, regional and multilateral programmes;
 - submitting the annual greenhouse inventory report and periodic national communication.
70. Officials have continued to engage in international and regional workstreams focusing on policy options for future action against climate change (eg OECD Annex One Experts Group meetings; dialogues facilitated by the Centre for Clean Air Policy; Pew Centre for Global Climate Change). Our engagement in these processes enables New Zealand to keep abreast of developing ideas, ensuring New Zealand has the capacity to engage fully in negotiations over future commitments.

Progress on development of further climate change policies

Emissions Charge

- 1 During 2003, considerable progress was made on the implementation of the emissions charge – the key price-based measures agreed by Cabinet for the Climate Change Policy Package. [Sentence withheld under the OIA s. 9(2)(f)(iv)]. The primary purpose of the emissions charge is to change the relative prices of more and less carbon intensive activities.
- 2 The emissions charge is being developed to apply to products which, when consumed, result in the release of greenhouse gases to the atmosphere. In practice, this relates mainly to the use of fossil fuels and emissions from industrial processes. To make the charge simple and easy to collect, the charge is proposed to apply mainly upstream to the producers and importers of fuels.
- 3 Approaches to revenue recycling, an important component of the emissions charge policy, are under development so that proposals can be considered by Government in conjunction with the emissions charge design.

Forestry

- 4 A work programme under the proposed Forest Industry Framework Agreement (FIFA) is currently addressing *Deforestation liabilities for non-Kyoto (pre-1990) forest owners during CPI* (the industry is seeking the removal of the cap or at least a significant increase in it *and* clarification of who would be held liable for any deforestation liabilities arising should any cap be breached) and *Harvesting and deforestation liabilities for Kyoto (post-1990) forest owners* (Kyoto forest owners are seeking a clear statement that Government policy will provide total and ongoing indemnity against all harvesting *and* deforestation liabilities for forests where the Crown has retained sink credits).
- 5 A paper seeking Ministers' direction on these two issues is being considered as part of the FIFA report back during April and May 2004.

Permanent Forest Sinks Mechanism

- 6 This is a mechanism to incentivise the creation of permanent (non-harvest) forest sinks by providing landowners with returns from such forests for the carbon sequestered by them over the Kyoto Protocol's first commitment period (2008-2012).
- 7 Legislation has been drafted and will be introduced into the House by July 2004 (as part of the Climate Change Response Amendment Bill).
- 8 [withheld under the OIA s. 9(2) (ba) (i)]
- 9 [withheld under the OIA s. 9(2) (f) (iv)]
- 10 [withheld under the OIA s. 9(2) (f) (iv)]

11 [withheld under the OIA s. 9(2) (f) (iv)]

Small and Medium Size Enterprises (SMEs)

12 Some SMEs will be significantly affected by the proposed emissions charge, especially businesses that are high energy users and likely to be competitively at risk in export markets (or domestically where their products or services compete with imports). NZCCO is working up options to address this issue and will report back to me with a preferred option in April 2004 (and seek approval to engage business and industry groups in discussion about this). I expect to report back to Cabinet in May 2004 on progress in these matters. Funding to provide information to SMEs about actions to reduce greenhouse gas emissions has been secured through the 2004/05 Budget New Initiative. [sentence withheld under the OIA s. 9(2) (f) (iv)]

Business Opportunities

13 Officials have considered options for government action to encourage the development of a climate change service industry in New Zealand, with a focus on the Clean Development Mechanism (CDM) under the Kyoto Protocol. The CDM provides opportunities for New Zealand firms to undertake projects in developing countries that both assist in the sustainable development of the host country and create tradeable emission credits (called certified emission reductions) that can help New Zealand meet its emission reduction targets.

14 Officials have held a CDM workshop for business in April 2004 to prime them on opportunities in advance of a November 2004 Australia/New Zealand Climate Change and Business Opportunities Conference organised by the Environmental Defence Society with sponsorship from the New Zealand and Australian Governments and respective business organisations and unions. Further work to scope the establishment of a National Focal Point to coordinate and promote New Zealand's interests in CDM projects will be given priority in 2004. Funding to carry out this work has been secured through the 2004/05 Budget New Initiative.

Foundation Strategies

- 1 There are a number of strategies already in existence that support the Government's climate change objectives. These strategies include:

National Energy Efficiency and Conservation Strategy (NEECS)

- 2 The strategy promotes energy efficiency, energy conservation and renewable energy and moves New Zealand towards a sustainable energy future. The strategy's overall plan is to improve New Zealand's energy efficiency by at least 20% by 2012 and to increase our supply of renewable energy by 30 Petajoules by 2012
- 3 EECA's second-year progress report on the NEECS – 'Getting New Zealand's Energy Plan off the Ground' indicates that, while gains are greater in some sectors than in others, the country is currently on track to achieve the NEECS target of a 20% improvement in overall energy efficiency by 2012, with an across-the-board improvement of about 1.9% annually.
- 4 The parallel target of an additional 30 PJ of new renewable energy by 2012 is also on track, with 2.2 PJ of new renewables coming on stream in the NEECS first year. The Projects to reduce emissions will contribute to achievement of this target. To-date, the Projects, if all implemented, are anticipated to contribute an additional 5.4 PJ over time.
- 5 EECA is working in every sector to promote energy efficiency and renewables. Its role is largely one of coordination and facilitation, and achievement of the NEECS targets will depend in significant part on the success of EECA's partners in all sectors in their promotional and other activities.
- 6 Highlights of EECA activities included the introduction of Emprove, a programme targeted at medium to large energy users which replaces the Energy-Wise Companies campaign, energy audit grants for business, ongoing home insulation projects, and a pilot Home Energy Ratings scheme.

New Zealand Waste Strategy

- 7 This joint central government-local government strategy was launched in March 2001 and contains a number of national targets for priority waste areas. Targets for organic wastes and for waste disposal are those most relevant to climate change policy. Achievement of the targets for organic wastes would see substantial reductions in green waste and sewage sludge being disposed to landfills by 2010. The target for landfills would see all substandard landfills upgraded or closed by 2010. The expectation is that by 2010 all or most landfills would provide for landfill gas collection.
- 8 The Ministry for the Environment has recently completed a review of the targets in the New Zealand Waste Strategy. This review indicates that local

government has made good progress in setting local and regional targets consistent with the national targets. The review also indicates that some of the organic waste targets will be very difficult to achieve. No change to the targets is proposed at this point but they will be further considered in 2006. The Ministry has established a working group with local government and industry that will address barriers to recovery of organic wastes.

- 9 A review last year of landfills indicates good progress is being made towards the 2010 target. The Ministry is working towards a National Environmental Standard for the collection of landfill gas. This initiative will provide an assurance about the installation of gas collection at all major landfills.

New Zealand Transport Strategy (NZTS)

- 10 The NZTS is focused on the development of sustainable transport and the reduced carbon intensity of transport is a key linkage to the work of the NZCCO and EECA. The NZTS has five key objectives that seek to integrate environmental, social and economic outcomes within the transport sector.
- 11 NEECS is relevant to transport because it focuses on the use of renewable energy, including renewable transport fuel and also programmes to increase use of energy efficient modes and technologies.
- 12 Under the NZTS and the NEECS Transport Action Plan work progressed in the following areas:

Vehicle Emissions

- 13 The Land Transport Vehicle Exhaust Emission Rule 2003 (33001) came into force in January 2004 for light vehicles and will affect heavy vehicles from 2006. It requires all vehicles entering New Zealand to show that, at the time of manufacture, they met approved emissions standards from the US, Europe, Japan or Australia.
- 14 A work programme has been confirmed for emissions screening. This is to include development of regular in-service screening of vehicles during their life on the road as part of Warrant of Fitness or Certificate of Fitness, and screening of imported vehicles at the border. The aim is to have these measures in place by late 2006.

Travel Behaviour Change, including Walking and Cycling and Travel Demand Management (TDM)

- 15 Public consultation has occurred in the Ministry of Transport's draft national strategy "Getting there – on foot, by cycle".
- 16 EECA is working with schools to identify and address barriers to children walking and cycling to school, including support for walking school buses. Community Travel Plans have been developed and are being implemented and Business Travel Plans are currently being trialled.
- 17 The assessment of the Auckland Regional Land Transport Strategy under the Auckland Joint Officials Group highlighted the need to strengthen the delivery

of travel demand management (TDM) initiatives. This was reflected within the recently announced Auckland Transport Package.

Public Transport

- 18 Public transport continues to be supported. Patronage funding, administered through Transfund, showed good results in improving public transport patronage levels. For the 2 years to June 2003, patronage has increased by 20% in Auckland, 5% in Wellington and 40% in Christchurch.

Renewable Fuels

- 19 The regulatory barrier preventing ethanol/petrol blended fuel was removed in September 2003, allowing for up to 10% ethanol to be blended with petrol. Industry uptake issues are being worked through. The use of ethanol is supported by a 2-year window when no excise tax will be charged.
- 20 Work programmes have commenced to facilitate discussions on other renewable fuels. EECA ran an industry forum in December 2003 to identify future issues and opportunities regarding biodiesel. MfE ran an international workshop on hydrogen in February 2003 and agencies have continued to monitor hydrogen and alternative technologies.

Vehicle Choice

- 21 MfE, EECA and MOT are working to include eco-efficient vehicle purchasing criteria in government procurement guidelines as part of the Govt3 project.
- 22 The vehicle fuel consumption information and labelling scheme aims to provide consumers with information on the fuel consumption of vehicle models available in New Zealand in order to promote the uptake of fuel efficient vehicles. MOT assumed leadership of the project in late 2003 and is working closely with EECA, the Land Transport Safety Authority (LTSA) and NZCCO.
- 23 Recent months have seen the commercial release of Toyota and Honda petrol-hybrid vehicles in New Zealand. Initial indications are that these vehicles are being well received by the market.

Land Transport System Provision and Pricing

- 24 The enactment of the Land Transport Management Act 2003 (LTMA) has embedded the objectives of the NZTS into the strategic objectives and operational procedures of the transport Crown entities, including Transit, Transfund and LTSA. This Act also requires land transport programmes to take into account the National Energy Efficiency and Conservation Strategy, which strengthens delivery of demand side measures to reduce the carbon intensity of transport.
- 25 The LTMA improves the flexibility of land transport funding and enables new roads to be built on a tolled or concession agreement basis. However, provisions do not yet exist to enable fixed or variable “tolls” to be charged which reflect the externalities of land transport system use.

- 26 The Surface Transport Costs and Charges (STCC) study, commissioned by MOT, is currently seeking to identify the cost of environmental externalities, including greenhouse gas emissions, across the land transport system (includes both road and rail).
- 27 The STCC study is also being used to inform current work in the investigation and introduction of road pricing measures.

Research

- 28 In addition to the STCC study outlined above, research has been undertaken in the following areas:
- Decoupling economic growth from transport - reports commissioned by MOT;
 - Research into the characteristics and impacts of fleet vehicles – EECA’s EnergyWise fleet management programme.

Fuel Quality Standards

- 29 The New Zealand Petroleum Products Specification Regulations (PPSR) 2002 came into effect on 1 September 2002. By 2006 sulphur levels in diesel will be 50mg/kg maximum, with an initial limit of 500 mg/kg in August 2004. Lower sulphur levels lead to more efficient combustion of fuel and allow for use of more fuel-efficient engines and related technologies (i.e. particle filters).

Other areas of related activity

- 30 For transport, a key objective is integration across government and across different strategies. Transport links have been made through:
- The Sustainable Development Programme of Action - active involvement in Sustainable Cities and Sustainable Energy;
 - Integration of transport and land use planning - strong links to Sustainable Cities and the Urban Design Protocol;
 - Fostering stronger links between Government Transport Sector and the NZCCO to progress emissions charge, NGAs and the Projects mechanism.

Growth and Innovation Framework

- 31 The Growth and Innovation Framework sets out the government’s sustainable economic growth objectives and what the government believes it and the private sector must do to achieve higher sustainable economic growth. The Framework identifies innovation and knowledge as the drivers of growth, with the key areas for action being:
- strengthening the innovation framework;
 - growing and developing talent and skills;
 - improving global connectedness.
- 32 Innovation is the key to sustainable economic growth. It not only enables us to produce the higher value-added products and services that generate higher incomes, but can provide solutions to sustainability issues and improve the efficiency of the production process.

- 33 In June 2002, the New Zealand Business Council for Sustainable Development in conjunction with the MED produced a report – “Business Opportunities and Global Climate Change”. The report describes 32 potential business opportunities that the six participating companies have identified within their operations.
- 34 The report also provides high-level quantitative analysis on potential opportunities in five areas (commercial building energy efficiency, wood waste to energy, the Clean Development Mechanism, methane reduction through ruminant efficiency and “climate friendly” branding). Scenario analysis using high-level assumptions revealed that opportunities in these five areas could be worth in excess of NZ\$350 million per annum and could deliver greenhouse gas savings of around 9 million tonnes of CO₂ per annum. This is estimated to be the emissions reduction equivalent of taking over 2 million average family cars off the road.
- 35 Business opportunities for climate change service industries to contribute towards the overall goal for sustainable economic growth under the Framework are under development.

Workstream	Stage of Policy Development	Stage of Implementation	2004 Work Programme
Emission Charge (EC)	[sentence withheld under the OIA s. 9(2) (f) (iv)]	Policy implementation details under development	<ul style="list-style-type: none"> Finalisation of carbon charge design. [withheld under the OIA s. 9(2) (f) (iv)]
Emission Trading	Policy under development [sentence withheld under the OIA s. 9(2) (f) (iv)]	First emissions units allocated and first projects agreements signed	<ul style="list-style-type: none"> [sentence withheld under the OIA s. 9(2) (f) (iv)] Linkages into offshore emissions trading schemes to be investigated.
NGAs – Eligibility	Completed	Eight firms eligibility confirmed	Four more eligibility assessments to be completed
NGAs Negotiation – Initial Set	Underway	Four negotiations underway. Three in World’s Best Practice (WBP) stage.	Completion of negotiations (6) Three additional WBP studies
NGAs Negotiation – Further Applications (second set)		No further applications yet.	Possible sectoral applications to be discussed Process any further applications received
Projects to Reduce Emissions	Completed	<ul style="list-style-type: none"> First tender round complete. 14 projects signed up Review of first tender round completed 	<ul style="list-style-type: none"> Other successful Projects on offer for remaining units. Emission units for next round post 1 July agreed for Budget 04/05. Promotion of project units to overseas purchasers Undertake a second tender projects round Work on issues raised in the review of first tender round to increase the attractiveness of NZ units (forward trading, insurance products)

Workstream	Stage of Policy Development	Stage of Implementation	2004 Work Programme
SMEs	[withheld under the OIA s. 9(2) (f) (iv)]	[withheld under the OIA s. 9(2) (f) (iv)]	[withheld under the OIA s. 9(2) (f) (iv)]
Business Opportunities	<ul style="list-style-type: none"> [withheld under the OIA s. 9(2) (f) (iv)] Budget bid agreed on establishment of a climate change service industry. 	<p>[withheld under the OIA s. 9(2) (f) (iv)]</p> <p>Workshop to engage industry interest in business opportunities and CDM held in April</p>	<ul style="list-style-type: none"> Australia-New Zealand Conference on Climate Change and Business Opportunities-November. Implement new initiatives e.g. establish national CDM focal point, disseminate information
Emissions Unit Register (EUR)	Done	Policy approved for individual accounts and legislation being drafted for introduction by mid-year.	Complete Stage 1 development of high level requirements and Stage 2 functional specifications.
Climate Change Response Act and Amendment Bill	Act passed, amendment bill being drafted	Drafting instructions completed for permanent sinks mechanism and emissions units register.	<ul style="list-style-type: none"> Introduction of Bill to the house by mid year and support select committee process. Work programme to provide guidance on the new provisions in the Act when passed.

Workstream	Stage of Policy Development	Stage of Implementation	2004 Work Programme
Agricultural GHG Research Strategy	Levy taken off table and strategy agreed	Completed. MoU signed with industry.	<ul style="list-style-type: none"> Monitoring of the expenditure on research. First Consortia review. Encourage uptake of technologies once identified. Research to support changes on farm e.g. energy efficiency Centre of Excellence-EECA. Build understanding and support amongst farmers.
Forestry – Permanent Sinks Mechanism	Done	Drafting instructions completed.	<ul style="list-style-type: none"> Bill for introduction by mid year and support for select committee . Regulations to be prepared for implementation. Information for implementation to be prepared.
[withheld under the OIA s. 9(2) (f) (iv)]	[withheld under the OIA s. 9(2) (f) (iv)]	[withheld under the OIA s. 9(2) (f) (iv)]	[withheld under the OIA s. 9(2) (f) (iv)]
Forestry – Deforestation Cap	[withheld under the OIA s. 9(2) (f) (iv)]	Paper prepared for Cabinet consideration of deforestation liabilities and cap and with Ministers for discussion with industry in context of FIFA.	<ul style="list-style-type: none"> Paper to Cabinet EDC. Develop any policy implementation arising from review of deforestation cap issues Work with stakeholders. Work on facilitation of afforestation.
Forest Industry Framework Agreement (FIFA)	Done	<ul style="list-style-type: none"> FIFA prepared and under discussion with industry. Budget bids agreed. 	<ul style="list-style-type: none"> MOU to be signed. Implementation of work programme Budget approval for bioenergy projects (EECA)
RMAct Amendment Bill	Done	Amendment Bill passed to includes consideration of climate change impacts, energy efficiency and renewable energy.	<ul style="list-style-type: none"> Information material to be completed for local government to implement the amendments re efficient use of energy, renewables (wind, bioenergy and geothermal)

Workstream	Stage of Policy Development	Stage of Implementation	2004 Work Programme
3 Year Voluntary GHG Emissions Abatement Programme run in partnership with local government (CCP-type) programme	Done	<ul style="list-style-type: none"> Tender round for programme deliverer held. Contract signed. 	<ul style="list-style-type: none"> Programme to be launched May. Management of deliverables
Partnership with LGNZ on Climate Change	Done	Scope agreed and contract signed.	<ul style="list-style-type: none"> Management of deliverables Dissemination of information to local authorities.
Adaptation guidance programme for councils	Done	Initial set of guidance material completed .	<ul style="list-style-type: none"> Roll out of material April/May and training for local government to underpin RMA and Communities for Climate Protection programme. Further guidance material to be prepared.
Synthetic Gases <ul style="list-style-type: none"> MoU with Electricity supply industry on SF6 Work with industry on alternatives and recovery of HFC's 	Done	Final draft MOU completed.	<ul style="list-style-type: none"> Final MoU to be signed. Study on HFC alternatives Work on regulatory approaches to HFC reductions Work on refrigeration handling issues, recovery of HFC's and handling issues
National Inventory Report	Done	Annual inventory report completed 15 April 2003 and April 2004.	Annual inventory report for submission 15 April 2005.
Annual Update of NZ's net emissions position	Administrative process to coordinate across MED, MAF by NZCCO	Report completed by 15 May each year	Net position report completed by 30 April 2004
Science input to policy implementation and research	Done	Ongoing underpinning work programme	<ul style="list-style-type: none"> Survey of climate change research in NZ. Science input to IPCC. Support for NZ scientists to participate in 4th IPCC Assessment Report. Input to policy implementation and public awareness programme.
National System for the Greenhouse Gas Inventory	Ongoing	Under development	Alignment with international guidelines for institutions, capacity and technology support.

Workstream	Stage of Policy Development	Stage of Implementation	2004 Work Programme
Carbon monitoring/accounting system	Done	<ul style="list-style-type: none"> Carbon monitoring plots being established in indigenous forests and scrublands (350 out of 1400 completed). MOU with MAF in place to establish plots in planted forests. Soil-paired plots being established to determine soil C changes associated with land-use change (5 of 38 established). Steering Committee and a Technical Advisory Group established. 	<ul style="list-style-type: none"> Continue sampling in indigenous forests, scrublands and soils, along with QA and data analysis. Commence plot sampling in planted forests. Start developing the 1990 baseline map of NZ. Complete uncertainty analysis of the NZ Carbon Accounting System. Funding carbon research and modelling.
4 th National communication under the UNFCCC	Done	Due 1 January 2006.	
Report on demonstrable progress under the Kyoto Protocol	Done	Due 1 January 2006	
International	Kyoto rules completed	<ul style="list-style-type: none"> UNFCCC reporting, reviewing ongoing through SBSTA and STI and COP. Dialogue underway on future commitment periods. Dialogue started with EU on emissions trading. Participation in international science fora. Partnership Agreements with United States and Australia. 	<ul style="list-style-type: none"> Maintain integrity of carbon sinks policy. International emissions trading, sink credits promotion. Future negotiations. Ongoing participation in relevant international science fora including IPCC, OECD, CCAP, GCOS. New round of US and Australian Partnerships projects
Public Awareness & Education (PA and E)	Done	<ul style="list-style-type: none"> Baseline research completed 4 million careful owners First Phase completed. Market research on campaign effectiveness completed. Support for NGA public announcements. Support for project mechanism announcements and other NZCCO initiatives. 	<ul style="list-style-type: none"> Develop Phase 2 PA and E campaign. 4million careful owners support for EECA initiative. Closer working relationships developed with Australia and USA as per international agreements on public outreach. Continuing support and awareness of NGAs, projects and business initiatives.

Workstream	Stage of Policy Development	Stage of Implementation	2004 Work Programme
Adaptation	Done	<ul style="list-style-type: none"> Adaptation material for local government prepared including case studies, practice notes, and decision-making tools. Update of regional climate information. RMAct amended to consider climate change impacts. Building Act reference to sustainable development supports consideration of climate change related issues. 	<ul style="list-style-type: none"> Development of agriculture sector based adaptation materials, tools and processes with CRI's. Workshop on national adaptation strategies in OECD countries Completion of research on economic impacts of extreme climate events. Further work on impacts of climate change on key economic sectors.
Waste Strategy	Done Strategy approved and being implemented.	<ul style="list-style-type: none"> National (and some regional/local) targets set for reduction of organic wastes of landfills. Development of national environmental standard for the collection of landfill gas. 	<ul style="list-style-type: none"> Implementation of collaborative project aimed at reducing barriers to recovery of organic wastes. Implement landfill gas standard.
Transport Strategy	Climate Change recognised in New Zealand Transport Strategy by reduced carbon intensity of transport	<ul style="list-style-type: none"> Vehicle Exhaust Emissions Rule comes into force in 2004 for light vehicles and 2005/6 for heavy vehicles. Public consultation on walking and cycling strategy underway. Transfund patronage funding showing good results. Regulatory barriers to ethanol/petrol blends removed. Biodeisel work started. Travel demand management strategies developing e.g. walking school buses. Decisions related to fuel standards and NGA for NZ Refining Company upgrade 	<ul style="list-style-type: none"> Draft vehicle exhaust emissions rules. Public education. Evaluation programme for rules. Fuel standards implementation. Fuel efficiency. Programme relevant to climate change being worked up currently through shared MOT, CCO/Mfe staff position.
NEECS	Done	<ul style="list-style-type: none"> Energy efficiency improved by 1.9% saving 8.9 PJ Biogas, wind and solar all grew. 7.3% towards 30PJ renewables target. 	Programme as agreed in NEECs.