



Ministry for the
Environment
Manatū Mō Te Taiao

Climate Change and Long-term Council Community Planning

Published in October 2008 by the
Ministry for the Environment
Manatū Mō Te Taiao
PO Box 10 362, Wellington, New Zealand

ISBN: 978-0-478-33134-9 (electronic)

Publication number: ME 911

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



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Introduction

To address climate change successfully New Zealand has to:

- comply with and support the development of international climate change agreements
- play its part in reducing net greenhouse gas emissions
- adapt to the inevitable physical impacts of climate change.

Local authorities have a key role to play in New Zealand's response to this challenge. Local authorities are currently reviewing their Long-term Council Community Plans (LTCCPs) which will outline their activities over the period from 2009 to 2019. Climate change will have direct and indirect implications for local authorities over this time period.

By taking a strategic approach in this round of LTCCP reviews, local authorities and their communities will be well positioned to adapt to the effects of climate change and respond positively to the incentives provided by the New Zealand Emissions Trading Scheme (ETS) and other climate change mitigation policies.

This publication gives an overview of how you can incorporate climate change into your LTCCP and provides you with links to more detailed information and guidance.

How might the climate change?

New Zealand's climate is already changing. Projections of New Zealand's future climate indicate:

- temperatures increase on average 1°C by 2040 and 2°C by 2090
- rainfall has a pattern of increases in the west (up to 5 percent by 2040 and 10 percent by 2090) and decreases in the east and north (exceeding 5 percent in places by 2090). There is marked seasonality in the rainfall distribution pattern changes
- sea-levels will rise
- decreased frosts
- increased frequency of high temperatures
- increased frequency of extreme daily rainfalls
- higher snow lines and possible reduced snow coverage
- possible increase in strong winds
- wetter in the west and south, drier in the north and east
- increase in the frequency and severity of extreme events (eg, heavy rainfall, storm surges, drought and very high temperatures).

Key principles for responding to climate change

Local government is required to operate under a range of principles that are set out in law or have evolved through good practice and case law. These principles should also be kept in mind when adapting to the effects of climate change. The key principles are:

- sustainability
- consideration of the foreseeable needs of future generations
- avoidance, remedy or mitigation of adverse effects
- adoption of a precautionary / cautious approach
- the ethic of stewardship / kaitakitanga
- consultation and participation
- financial responsibility
- liability
- resilient communities.

Adaptation: What can local government do to adapt to the impacts of a changing climate?

Adaptation is about undertaking actions to minimise threats or to maximise opportunities resulting from a changing climate and its effects. Examples are raising river or coastal defences, changing land use and replacing sensitive plants with temperature-shock resistant plants.

It is anticipated that climate change will exacerbate existing climatic hazards. Climate change is one of many risks that should be addressed as part of the planning process. This is best done through integrating climate change into existing processes and policies. It is particularly important to consider the impacts of climate change in long-term planning for infrastructure and developments that will need to cope with climate conditions in 50–100 years.

A key element in adapting to climate change will be identifying flexible options that allow an incremental response over time. It is also important to identify options that help reduce current vulnerability.

“Preparing for Climate Change: A guide for local government in New Zealand” includes further information on how local government functions might be affected by climate change. The publication also includes information on key factors to take into account when assessing where climate change is likely to have a critical impact. It also provides guidance on a risk management approach to take for mainstreaming climate change adaptation into planning and decision-making processes.

Checklist for considering climate change adaptation in long-term council community plans

- Have the long-term implications of climate change been identified in relation to community outcomes?
- Have you ensured planning horizons include consideration of long-term impacts of climate change?
- Have you identified how climate change could affect water supply, wastewater, stormwater, roading, pest management, flood protection systems, drainage schemes, parks and reserves management, etc? Have risk reduction measures been identified?
- Are other programmes or plans relating to climate change identified (eg, biosecurity and biodiversity)?
- Have the effects of a changing climate on future land use and rural communities – for instance, agriculture, horticulture and forestry – been considered? Will future land use or land-use change require different or more infrastructure investment in the future?

- Is a change in level of service, or additional capacity, required owing to climate change (ie, requirements will be beyond the current design level of service or capacity)?
- Has a monitoring regime been considered to assess how climate change is affecting services and functions?
- Are the levels of uncertainty involved in the forecasts of climate change explained, and is an estimate of the uncertainty provided?

A more detailed checklist and lists for other plan types are provided in “Preparing for Climate Change: A guide for local government in New Zealand”.

Links to further information

Central government websites:

- [Ministry for the Environment – Adapting to climate change](#)
- [New Zealand’s climate change solutions](#)
- [Ministry of Agriculture and Forestry – Climate change](#)
- [Ministry of Agriculture and Forestry – Rural New Zealand](#)
- [New Zealand Transport Agency.](#)

The following documents provide further information on adapting to climate change:

- [Preparing for climate change: A guide for local government in New Zealand](#)
- [Climate change effects and impacts assessment: A guidance manual for local government in New Zealand \(2nd edition\)](#)
- [Coastal hazards and climate change: A guidance manual for local government in New Zealand \(2nd edition\)](#)
- [Case study 1: Coast care Bay of Plenty dune restoration](#)
- [Case study 2: Tauranga City Council prepares for more intense rainfall](#)
- [Case study 3: Transit NZ – Climate change and the state highway network](#)
- [Case study 4: Impacts of sea-level rise on the Avon River, Christchurch](#)
- [Preparing for and adapting to climate change – Look ahead to the future](#)
- [The EcoClimate Report: Climate change and agricultural production](#)
- [Quality Planning \(QP\) website:](#)
 - [climate change guidance note](#)
 - [natural hazards guidance note](#)
 - [coastal guidance note.](#)

The following documents refer to older climate change scenarios. However they still provide useful information on the directions of climate change trends and impacts:

- [Making good decisions – Climate change effects](#)
- [Climate Change: Likely impacts on New Zealand agriculture](#)
- [Changes in drought risk with climate change](#)

- Economic impacts on New Zealand of climate change-related extreme events: Focus on freshwater floods
- The Waikato weather bomb: Understanding the impact
- Linkages between climate change and biodiversity in New Zealand
- A methodology to assess the impacts of climate change on flood risk – Full report
- Methodology to assess the impacts of climate change on flood risk – Summary of report
- Adapting to climate change in eastern New Zealand
- Impact of climate change on long-term fire danger
- Incorporating climate change into stormwater design – Why and how?

Climate change mitigation

Mitigation is about reducing greenhouse gas emissions and enhancing forests and other “sinks” to remove greenhouse gases from the atmosphere.

Although New Zealand accounts for only 0.1–0.2 percent of global emissions, it is important for us to take action to mitigate our emissions. Future international agreements are likely to be more stringent, requiring New Zealand to take greater responsibility for its emissions. The stringency of emissions targets under international agreements, such as the Kyoto Protocol, represents the cost to New Zealand. The New Zealand Emissions Trading Scheme (ETS) distributes these costs from the general tax payer to emitters and consumers, who are best placed to reduce emissions. This allows emissions reductions to be achieved in a fair and efficient way across the New Zealand economy.

As well as the ETS, central government has committed to a comprehensive climate change mitigation work programme. The policies and strategies within this work programme affect communities and local authorities across New Zealand.

The remainder of this publication highlights some of the main things you may wish to think about when bringing climate change mitigation into your Long-term Council Community Plan (LTCCP).

- The first section focuses on the direct effects of the ETS for councils who will be participants in the ETS.
- The second section focuses on the indirect effects of the ETS, which arise as the costs of greenhouse gas emissions are passed through the economy. The second section also discusses other climate change mitigation policies and initiatives that will support the ETS by helping New Zealanders reduce greenhouse gas emissions and energy use, and adjust to the price effects of the ETS.

Direct effects – participating in the Emissions Trading Scheme

The Government has enacted legislation to introduce an ETS across all sectors of the economy. The scheme is one of the cornerstones of the Government’s response to climate change mitigation. The ETS will progressively place a price on greenhouse gas emissions, which means that the price of emission-intensive products and services will increase and the price of low-emission products and services will become relatively competitive over time.

Several local authorities will have obligations to surrender units or opportunities to receive credits under the ETS because of their activities in the forestry, waste or energy sectors. It is possible, that one or two councils will have obligations in the agricultural sector, but these are likely to be immaterial in terms of LTCCPs.¹

Managing your obligations and opportunities under the ETS will draw on additional human resources and, in some cases, will require additional budget appropriations for the purchase of units to cover landfill, deforestation, or on-farm emissions.

If your council is a participant with obligations under the scheme it will be required to surrender one New Zealand Unit (NZU) or a Kyoto unit to cover each metric tonne of eligible greenhouse gas emissions within a compliance period (usually a calendar year). These units can be purchased at any time internationally or domestically. Participants can also earn NZUs by undertaking afforestation and owners of pre-1990 forestry may also be eligible for a free allocation of emission units.

The scheme operates under a 'self-assessment' system similar to the New Zealand tax system. Participants take the actions they are required to take under the scheme, and the administering agency verifies their compliance, either itself or through an agent. The tax treatment of emissions units is explained in a note prepared by [IRD](#).

All sectors of the economy will be phased into the ETS over the next five years:

- forestry in 2008
- stationary energy and industrial processes in 2010
- liquid fossil fuels in 2011
- synthetic gases, agriculture and waste in 2013.

Participants in the industrial processes, liquid fossil fuels, agricultural and waste sectors will be able to start reporting their greenhouse emissions voluntarily two years before their obligations to surrender emission units begin, and are required to report their emissions one year prior.

Regulations will clarify the methodologies for measuring and reporting emissions in each sector. The regulations for forestry, liquid fossil fuels and the national emissions registry have now been gazetted and are available on the [climate change website](#). Regulations for the synthetic gases, agricultural and waste sectors will be developed over the next two years, as will further regulations for forestry.

The main resource for information on the ETS is the Government's [climate change website](#). The website includes: links to legislation, regulations, factsheets explaining how the ETS works for each sector in the economy, information about obligations and opportunities under the ETS, bulletins explaining how the scheme will develop, and several reports and studies on the projected impact of the ETS.

¹ In the agricultural sector, the obligation to be a participant in the ETS is at a processor level. However, the legislation also allows for this to change to the farmer level if determined by order-in-council by 30 June 2010. The ETS agricultural factsheet provides a simple summary of how agriculture is currently planned to be included in the ETS.

[New Zealand's Emission Unit Register](#) is New Zealand's national registry for managing the accounting, reporting and reconciliation of emissions unit holdings and transactions within the ETS. It explains the administrative processes for registering as a participant in the ETS.

A [glossary](#) of climate change and emissions trading scheme terms is also available on the climate change website.

The following sections provide information for participants in the three sectors for which council's are likely to be participants – forestry, waste and energy.

Forestry

The most immediate priority for some councils will be understanding their forestry obligations and opportunities.

Forest land is included in the ETS in two ways:

- compulsory – when pre-1990 forest land is deforested (unless exempt)
- voluntary – when owners of post-1989 forest land choose to bring it into the ETS.

Pre-1990 forestry entered the ETS with retrospective deforestation reporting requirements and unit obligations from 1 January 2008. Forestry participants do not have to account for their 2008 and 2009 emissions and removals until 2010.

Pre-1990 forest landowners will need to choose whether to apply for a one-off free allocation of emissions units in the first half of 2009. The free allocation will help to compensate for any loss in land value associated with deforestation liabilities under the ETS.

Alternatively, pre-1990 forest landowners may choose (if eligible) to apply to have land permanently exempt from the ETS (under the 'less than 50 hectare' threshold exemption or the 'tree weed exemption').

"The Draft Forestry Allocation Plan", released on 11 October 2008 for comments by 28 February 2009, outlines the proposed approach to allocating New Zealand Units (NZUs) to pre-1990 forest owners under the ETS. The supporting document "[Information Document: New Zealand Emissions Trading Scheme Draft Forestry Allocation Plan and Deforestation Exemption Policies for Pre-1990 Forest Land](#)" explains the rationale for that intended approach in more detail and also outlines the intended approach for granting exemptions.

Eligible post-1989 forest owners can opt to join the ETS, and gain NZUs for carbon sequestered as the forests grow. Participants will also have to pay NZUs back when carbon stocks decrease (such as from harvesting, fire, or when trees are uprooted or broken by wind).

The forestry regulations will provide all the information that forest owners will need to calculate and report their deforestation liabilities or afforestation benefits. This information will include:

- measurement methodologies for post-1989 forests
- look-up tables containing estimates of carbon stocks by stand age for various tree species
- tending regimes on various sites (eg, whether to prune and thin (and when), and consideration of controlling weeds, pests and diseases).

The first forestry regulations have been gazetted and are available on both the [MAF website](#) and on the [climate change website](#). Further forestry regulations will be proposed in 2009, to introduce further detail on the look-up tables and to introduce a field measurement methodology.

Further information about [sustainable forestry](#) is available on the Ministry for Agriculture and Forestry's (MAF's) website. This website includes the "Guide to Forestry and the Emissions Trading Scheme", the "Draft Forestry Allocation Plan", frequently asked questions and information about MAF's other sustainable forestry initiatives.

You can also subscribe to receive MAF's regular newsletter, "The Sustainable Forestry Bulletin", which updates subscribers on the latest ETS forestry development. To register for the newsletter email: climatechange@maf.govt.nz.

Waste

Most councils operate or contract out the management of solid waste disposal facilities. Methane emissions from these facilities will enter the ETS from 1 January 2013, with voluntary reporting from 1 January 2011 and mandatory reporting from 1 January 2012. Voluntarily emissions reporting will allow participants to 'learn by doing' and will help participants to understand their future emissions obligations.

The ETS only includes landfill methane emissions. Non-methane emissions, such as carbon dioxide, are not included. Emissions from wastewater treatment are also not included. However, operators of any future municipal waste incinerators will be subject to ETS obligations.

There will be no free allocation of units to waste disposal facilities as it is expected that the costs of purchasing compliance units will be passed onto the users of the landfill. Consequently, the costs of operating a landfill and of disposing waste will increase.

The regulation that sets out the methodology to estimate emissions will be developed over 2009 and 2010. This methodology will take into account any landfill gas collected and flared or used.

The inclusion of emissions from the waste sector in the ETS was delayed until 2013 in order to allow the implementation of the Waste Minimisation Act and its waste levy. At this stage, landfills with obligations under the waste levy will also be ETS participants from 2013.

The Waste Minimisation Act requires that territorial authorities develop and adopt waste management and minimisation plans to promote effective and efficient waste management within their districts. A guidance document is being developed to assist territorial authorities in completing their waste management and minimisation plans and is expected for release by the end of April 2009.

Energy

If your council uses geothermal fluid or is combusting used oil, waste oil, used tyres, or waste for the purpose of generating electricity or industrial heat, it will be a participant in the stationary energy sector of the ETS. The stationary energy sector enters the ETS on 1 January 2010.

The details on how to calculate and report emissions from the stationary energy sector are set out in the draft “[Climate Change \(Stationary Energy and Industrial Processes\) Regulations 2008](#)”.

Participants in the stationary energy sector will not be given any free emission units. This is because these costs can be passed through to consumers. However, the Government will provide some free emission units to those in the industrial sector who are significant energy users and who are restricted in their ability to pass on any cost increases to their customers.

ETS participants: checklist for LTCCP contents

- Do you have obligations to surrender units to the Crown under the ETS? For example:
 - Are you planning to, or have you, deforested an area greater than two hectares of (non-exempt) pre-1990 forest land from 1 January 2008?
 - Do you use oil, tyres or waste to generate electricity or industrial heat (from 1 January 2010)?
 - Do you use geothermal fluid for the purpose of generating electricity or industrial heat? (from 1 January 2010)?
 - Do you purchase, other than for on-selling, synthetic fertiliser containing nitrogen?
 - Do you farm, raise, grow, or keep ruminant animals, pigs, horses, or poultry for reward or for the purpose of trade in those animals, or in animal material or animal products taken or derived from those animals?
 - Do you operate a waste disposal facility (from 1 January 2013)?

Note: If you answered ‘yes’ to any of these questions, you need to consider obligations or potential obligations in more detail. You should familiarise yourself with the ETS as established in the Climate Change Response Act 2002 and in the new regulations developed under the Act.

- Could you be eligible for a free allocation of emissions units under the ETS?
Note: the allocation plans, including eligibility criteria, are still under development for trade-exposed industry and a draft allocation plan for owners of pre-1990 forestry is now publicly available.
- Do you have opportunities to earn credits under the ETS? Could you undertake afforestation, or do you have post-1989 forestry that could be registered under the ETS? Could you offset your emissions liabilities under the ETS by undertaking afforestation?
- Have you allowed for the additional human resources and budget lines required to manage these obligations or opportunities?
- Have you measured the greenhouse gas emissions generated by your council’s operations? Have you identified opportunities for reducing those emissions and your obligations under the ETS?

Indirect effects and other strategies, policies and initiatives

The Government has introduced other sector specific strategies, policies and initiatives that will support the ETS by helping New Zealanders reduce greenhouse gas emissions and adjust to the effects of the ETS. These programmes are closely inter-connected, and rely on partnerships with local authorities for their delivery.

The initiatives most relevant for local government extend across the following sectors:

- energy
- urban development
- transport
- rural land-use
- council operations and leadership
- communities.

The following section broadly outlines the major climate change mitigation strategies and initiatives for each of these sectors and provides a sector-by-sector checklist of questions for you to consider when incorporating climate change mitigation into LTCCPs.

Energy

The ETS and other energy and climate change policies such as the renewable preference (a 10-year restriction on new base-load, fossil-fuelled generation) will increase the economic viability of investment in renewable energy generation. Further, it will give incentive for greater energy efficiency – most notably through the new billion dollar household energy efficiency fund.

The New Zealand Energy Strategy (NZES) and the New Zealand Energy Efficiency and Conservation Strategy (NZECS) are in place and designed to foster a reliable and resilient system delivering New Zealand sustainable, low emissions energy services.

One of the actions under the NZES is to develop a National Policy Statement (NPS) on renewable electricity generation. The NPS will guide decision-makers on how they can have regard to the benefits of the use and development of renewable energy, as required by the Resource Management Act. The NPS has been publicly notified by the Board of Inquiry and Ministry for the Environment submissions are open until 31 October 2008. A Quality Planning guidance note is also being prepared to assist with the implementation of the NPS. The Ministry for the Environment's website provides further information on the [NPS on renewable electricity generation](#).

The Ministry of Economic Development is working with other agencies to prepare a document that will help local government work effectively with central government agencies to implement the [NZES](#) and [NZECS](#). For more information contact Jo Mackay: jo.mackay@med.govt.nz.

Energy: checklist for LTCCP contents

Operational:

- Have you audited the energy use of council operations and implemented energy efficiency improvements? Have you converted your energy sources to low emissions energy – including renewable energy?
- Do you promote energy efficient behaviour among staff members? EECA has developed the “[Staff Awareness and Motivation Kit](#)” to help organisations involve staff in managing their energy consumption.
- Have you developed energy efficiency standards for council buildings and retrofit projects?
- Are there any other opportunities identified in the NZES/NZEECS which may assist your council in its response to climate change?

Strategic direction and policies:

- When you plan for, or receive plans for, major new developments in your community, do you have processes in place to account for the impact of those developments on energy use? (This question encompasses developments such as new subdivisions, shopping areas, transport routes, or new community/event centres and wider urban form and development planning considerations.)
- Have you worked with your community to identify energy supply issues in your area including opportunities for local renewable energy development? Do you have a plan for how to develop local renewable energy resources?
- Have you identified the major sources of energy use in your community? Are there ways you can assist major energy users to reduce their emissions?
- Are there ways you can enhance opportunities for innovative design of subdivisions, buildings, and infrastructure to reduce energy use?
- Have you considered how you will give effect to the emerging NPS on Renewable Electricity Generation in local Resource Management Act plans and resource consent decisions?

Urban development

The future development of New Zealand’s urban areas will play a pivotal role in our efforts to reduce net greenhouse gas emissions and respond to a range of social, environmental, economic and cultural pressures – including climate change. Quality urban development can help reduce greenhouse gas emissions by encouraging people to travel less, and to use low-emissions modes of transport.

Over 30 councils have signed up to the “[New Zealand Urban Design Protocol](#)” – a voluntary commitment to specific urban design initiatives. The Ministry for the Environment is currently considering the scope of a national policy statement on urban design.

The Ministry for the Environment has developed detailed information on [urban issues](#) and the Department of Internal Affairs provides information and ideas about [sustainable urban development](#).

Urban development: checklist for LTCCP contents

Operational:

- Are there ways to use high-quality urban design to make active modes of transport, like walking and cycling, more appealing? For example, improving the aesthetics and safety of public walk-ways and cycle-ways?

Strategic direction and policies:

- Do your urban development plans take into account the potential for lowering transport emissions through more compact, better connected urban development? For example, do you reduce urban sprawl by focusing growth in established town centres with good existing public transport connections? Can you steer expansion away from green-field development towards redevelopment of brown-field land?
- Are your urban development plans integrated with transport plans to encourage public transport use and improve the efficiency of transport systems such as roads, rail, cycling and walking?
- Do your urban development plans consider the potential to reduce transport emissions through promoting a mix of uses in strategic locations, such as combining commercial, residential and public amenities in growth areas? For example, could you use flexible zoning to encourage higher-density, mixed-use developments? Would it be feasible to promote higher-density housing around public transport nodes? Could you encourage economic and social development programmes to provide employment and services for residents within their local area?
- Are you using appropriate assumptions when planning and making infrastructure and land-use decisions? For example, are your assumptions about vehicle kilometres travelled, land-use densities, fuel prices and population growth based on historical growth rates? Or do your assumptions take into account changes associated with the introduction of a price on greenhouse gas emissions and energy price increases arising from international pressures (eg, cost of crude oil)?
- Are there ways you can encourage 'greener' buildings? For example, developing sustainable building guidelines, regulations, or encouraging reuse of historic buildings? See the [New Zealand Green Building Council](#) website for ideas and case studies.

Brown-field is the term used to describe land that has previously been developed (eg, previous industrial land). Green-field development refers to new subdivisions on previously undeveloped land. Green-field developments often result in low-density, single-use developments with poor access to public transport and existing services and infrastructure.

Transport

The transport sector is set to enter the ETS in 2011, which is likely to result in a modest increase in fuel prices. International factors are also having an even greater effect on fuel prices and it is likely that these factors will continue to drive price increases, particularly in the long term.

Price increases are likely to lead to changes in the way people use transport. For example, there is likely to be a greater emphasis on freight transport by sea and rail and increasing demand for public transport.

Local government can have a significant effect on transport demand by facilitating the move away from reliance on traditional fossil fuels. A recent report commissioned by the New Zealand Transport Agency, entitled “[Managing Transport Challenges When Oil Prices Rise](#)”, models future fuel prices, consumer responses and implications and options for local authorities.

“[The New Zealand Transport Strategy](#)” (NZTS) sets out the Government’s long-term intentions for transport. It provides a framework for the activities of transport Crown entities and gives guidance for local authorities. Alongside the NZTS, the Government has recently released a “[Government Policy Statement on Land Transport Funding](#)” (GPS). The GPS ensures that shorter-term funding and planning for land transport contribute to the strategic objectives set out in the NZTS.

The New Zealand Transport Authority (NZTA) and the Ministry of Transport (MOT) are set to publish guidance on how regional targets in Regional Land Transport Programmes and Regional Land Transport Strategies can be consistent with national targets set in the GPS and NZTS respectively. This guidance will be available on the [NZTA website](#).

Transport is also a central element of all the urban development initiatives, the NZES and the NZEECS.

Transport: checklist for LTCCP contents

[Note the checklist under the urban development sections also offers several transport-related questions.]

Operational:

- How can you increase access to affordable, integrated, safe, responsive sustainable transport options? For example, by improvements to public transport, pedestrian, cycling, maritime and rail infrastructure.
- Have you undertaken an audit of council travel behaviour and vehicle fleets? Are there ways you could reduce transport emissions from council operations?

Strategic direction and policies:

- How can you provide community needs (eg, work, education, social engagements, products and services) with a minimum of required travel?
- How can you promote travel alternatives, such as telephone, internet and use of local service providers?
- How will your land-use policies and transport activities implement the regional targets in the GPS and the NZTS?

- Have you considered other benefits associated with active modes of transport such as: reduced congestion, improved air quality, and increased physical activity?
- Are there ways you could raise awareness and encourage behaviour change in your community? For example travel plans, ride-sharing, car and bike pooling, and public transport information?
- Are your proposals as set out above consistent with the demand management strategies required as part of the relevant Regional Land Transport Strategy?

Rural land use

The ETS and other climate change policies are likely to catalyse land-use changes. For example, measures such as the ETS, the Permanent Forest Sinks Initiative, the East Coast Forestry Project and the Afforestation Grant Scheme (of which 50 percent is being implemented via key regional councils) all encourage reduced deforestation and increased afforestation. Farmers are likely to be affected by increased energy costs and this may affect farming practices.

New forest establishments may also have additional environmental benefits such as erosion control, improved water quality, enhanced biodiversity, and flood risk management. There may also be negative effects for example, reduced water yields, increased problems with wilding trees, or loss of biodiversity due to inherent favouring of fast-growing exotic species over slower growing indigenous species.

The Government has agreed to resume work on a National Policy Statement (NPS) on biodiversity. The effects of the ETS on biodiversity will also be assessed when the ETS is reviewed in 2011. The Government has also previously released a [statement of national biodiversity priorities](#) for councils to use in planning and decision-making.

The Ministry for the Environment’s website provides a number of [technical reports](#) on the expected co-benefits and co-costs of climate change mitigation for water quality, air quality, flooding and erosion.

The Ministry for Agriculture and Forestry (MAF) has also commissioned a report entitled “[Projected Impacts of the New Zealand Emissions Trading Scheme at the Farm Level](#)”, which provides examples of the projected impacts on farm-level profitability for different farm types.

MAF’s website includes information on the Government’s “[Sustainable Land Management and Climate Change: Plan of Action](#)”. The website also includes information on forestry initiatives such as the “[Afforestation Grants Scheme](#)” and the “[Permanent Forest Sinks Initiative](#)”.

Rural land use: checklist for LTCCP contents

Operational:

- Have you considered whether changes in land-use and farming practices will have flow-on effects for your community, and provision of services?

Strategic direction and policies:

- How can you support the shift towards less emissions-intensive farming practices and land uses? For example, more efficient nutrient management, irrigation or greenhouse heating and greater use of on-farm renewable energy such as small-scale wind, wood and solar generation.
- How can you put the statement of national biodiversity priorities into practice?
- Have you considered other potential adverse effects of land-use change in your planning documents, such as reduced water yields and increased problems with wilding trees?

Council operations and leadership

Local authorities will feel the indirect effects of the ETS as the costs of greenhouse gas emissions are passed through the economy, for example, through increased electricity and fossil fuel prices.

Councils can avoid or minimise the impact of these price increases, demonstrate their commitment to addressing climate change, and influence change in their communities by reducing greenhouse gas emissions from their own operations.

As a local authority, you can obtain assistance on measuring and reducing greenhouse gas emissions and energy use from your own operations through the Communities for Climate Protection (CCP-NZ) programme. The [CCP-NZ programme](#) provides a framework for councils to identify and measure their sources of greenhouse gas emissions and to identify and implement actions to reduce them such as: saving energy and promoting renewable energy, increasing sustainable transport, enhancing urban design, reducing emissions from landfills, and supporting adoption of low-carbon technology.

Alternatively, you may wish to refer to the “[Greenhouse Gas Protocol](#)”, which sets out a best-practice methodology for measuring greenhouse gas emissions. The Ministry for the Environment has also published the “[Guidance for Voluntary, Corporate Greenhouse Gas Reporting](#)”, which provides guidance for New Zealand organisations that wish to voluntarily measure their emissions. This document includes New Zealand-specific guidance, such as emission factors common to New Zealand operations.

Examples of the sorts of things that will help reduce operational greenhouse gas emissions can also be found in the reduction plans of the 34 core central government agencies that are part of the [Carbon Neutral Public Service programme](#).

Council operations: checklist for LTCCP contents

- Do your offices have good natural light and ventilation, summer sun shading, energy efficient lighting and heating, sustainable timber framing and veneers, and recyclable aluminium features?
- Do you have systems to separate food scraps for composting, and recycling paper and other waste?
- Have you implemented a workplace travel plan looking at the efficiency of council fleets and other business-related travel?
- Have you implemented [staff programmes](#) to promote behavioural changes such as turning off computers and lights, recycling, and reducing unnecessary travel?

- Do you have storage facilities, lockers and showers for cyclists and walkers?

Communities

Your community will also be affected by increases in electricity and transport costs associated with the ETS. The Government has introduced several measures alongside the ETS to support households during the transition period, including:

- a targeted one-off payment to beneficiaries, super-annuitants and working-for-families recipients in 2010 to assist with the impacts of electricity price increases
- a universal one-off electricity rebate to all households
- a new household energy efficiency fund worth \$1 billion over 15 years from 1 January 2009, which aims to reduce non-transport household emissions through the promotion of household energy efficiency and conservation, household renewable energy technologies, insulation and clean heating retrofits, and incentives for energy efficiency appliances and lighting.

The Government is also working with Local Government New Zealand to commission research on the socio-economic impacts of the ETS on rural communities throughout the country. The results of this research will be available to local authorities once it has been completed early next year.

There are many things you can promote to motivate householders to reduce their emissions and their impact on the environment. Sustainability.govt.nz is a useful resource to get them started. Financial assistance for households to install insulation and clean heating appliances is also available through the [Energywise programme](#).

There are also several Government initiatives that will help businesses adjust as the ETS takes effect. For example, the [Emprove programme](#) provides energy management information and tools, financial assistance for energy surveys and audits, training and support at energy seminars and courses, on-site solutions, a staff awareness and motivation kit, and technical information and tips. [The Energy Intensive Business programme](#) also provides cash grants for investment in energy efficient technology.

The emissions trading legislation also includes a contestable fund of carbon units to promote innovation in low-emissions technology. Details of the fund will be worked through over the coming month and published on the [climate change website](#).

Communities: checklist for LTCCP contents

- Are there ways you can increase awareness and uptake of Government energy efficiency programmes? For example, Energywise, the Emprove Programme, the Energy Intensive Business Programme and the new household energy efficiency fund administered by EECA?
- Are there other ways you can support and influence your community's response to the ETS and encourage energy efficiency in your communities? For example, subsidising advice services for homes and businesses? Or, providing households with information and advice to encourage them to take simple steps to reduce emissions and energy use?

- Are there ways you can support and influence businesses within your community to respond to the ETS, such as providing information and advice to encourage them to measure their carbon footprint and make emissions reductions?