

Climate Change Policy – Kicking the Carbon Habit

Introduction

"Our central survival task for the decades ahead, as individuals and as a species, must be to make a transition away from the use of fossil fuels – and to do this as peacefully, equitably, and intelligently as possible." (Heinberg 2007)

International scientific consensus is that our climate is changing. As a result of human activities, atmospheric levels of carbon dioxide and other greenhouse gasses, such as methane, are now higher than they have ever been in the last 650,000 years. These gasses trap the heat from the sun, and our planet is becoming warmer, which is causing our climate to change.

Some of the currently observable effects of global warming and climate change include:

- Arctic Sea ice disappearing at a much faster rate than predicted by scientific models and glaciers in retreat in most parts of the world.
- Melting of permafrost in the tundra in Siberia and northern Canada, releasing the methane currently trapped in these frozen swamps.
- Increasing numbers and intensity of extreme weather events such as droughts, floods and storms with devastating consequences for local populations.
- Accelerated sea level rise, threatening low-lying islands in the South Pacific who have had to develop evacuation plans.

The impact of this human induced climate change disproportionately affects the world's poorest and most vulnerable people. The World Health Organisation estimates that already each year 150,000 people are dying as a direct result of climate change. Food production is also adversely affected as many crop plants in the tropics are already at their physiological limits.

Many scientists are saying that climate change represents the greatest threat to environmental, social and economic wellbeing that humans have ever faced. A rise of in global temperatures of 2 degrees is predicted to result in a

loss of global biodiversity of around 25%.

If we do nothing and we carry on as we are then irreversible runaway climate change will eventuate as ecosystems switch from net absorption of carbon dioxide to emitting carbon dioxide.

Such runaway climate change would have severe consequences for the planet. Whole ecosystems would be wiped out and sea level rises would threaten coastal communities, contaminate water supplies and damage infrastructure everywhere. Millions around the world would face death and starvation as a result.

New Zealand is not immune to the effects of climate change and already has to deal with increased severe weather events such as extreme floods and storms and more frequent droughts. These trends will get worse. Sea level rise threatens our largely coastal settlements and infrastructure, and new pests and diseases will become established.

At the moment runaway climate change is probably still preventable, but it will require a concerted effort from all governments, businesses and individuals to achieve this. We have a very short period of time in which to act. Although New Zealand produces a small proportion of global emissions, we have one of the highest per capita emissions in the world. As a signatory to the Kyoto protocol, we have a strong international and moral obligation to reduce our emissions.

As well as the huge social and environmental costs of climate change, the economic cost of inaction are extremely high. The Stern report (2006) showed that an investment of 1-2% percent of global GDP is required to mitigate the effects of climate change, while failure to do so risks costs of up to 20% Global GDP by 2100.

All of this means that we must drastically reduce our greenhouse gas emissions as quickly as we can. The Green Party supports the general scientific consensus that any human induced warming beyond two degrees is likely to lead to tipping points and irrevocable change, which are unacceptable both for humanity and the environment. We take our lead from the latest science, which suggests that this will require a 90% reduction from 1990 levels in developed countries' GHG emissions by 2050.

The Green Party believes that domestically, our target should comprise of at least 60% domestic reductions with up to 30% from purchasing reductions overseas, if they are available.

There can be no doubt that this will require substantial economic and social reform. Although the Greens value early action and near term targets, clearly articulated interim targets will also be required. A 30% reduction in

emissions by 2020 is proposed, with a minimum of 20% coming from domestic reductions.

The Green Party's **Energy** and **Transport** policies contain the details of many practical climate change actions.

*Note: Please also see our **Agriculture and Rural Affairs**, **Conservation**, **Taxation and Monetary**, **Environment**, **Housing**, **Waste**, and **Water** policies for further detailed policy points that are relevant to climate change*

Background Information

The national and international context for climate change policy has been changing fast over recent years. In March 06, in response to the cancellation of the carbon charge we released "Turn Down the Heat" which set out complementary measures and ways of putting a price on carbon without a carbon charge. In March 07 we published "Kicking the Carbon Habit", our proposals for how a third way, neither carbon charge nor full emissions trading, could work. Some of the thinking in this was adopted by the Government's Emissions Trading Policy, although this still has some major flaws.

Definitions

- **Kyoto Forest** – Forests planted since January 1, 1990 on non-forested land.
- **PFSI** - Permanent Forest Sink Initiative; forests (other than pine) planted since January 1, 1990 and not intended for clear felling that meet specific criteria for management and are therefore eligible for carbon credits under 2006 legislation.
- **Plantation forests** – forests that are planted for production purposes.
- **Kyoto Units** - Under the Kyoto Agreement, credits have to be held or purchased for each tonne of carbon emitted into the atmosphere. Such units come in various forms: AAU, CER, RMU, ERU. They are from here on called "Kyoto units".
- **KP1** – Kyoto Period #1 (1 January 2008 – 31 Dec 2012), the first time period to which the mandatory targets of the Kyoto protocol apply.
- **KP2** – Kyoto Period #2 (probably 1 January 2013 – 31 Dec 2020), the second time period to which any mandatory targets of Kyoto's successor will apply.
- **Sustainable** – an activity that can keep going indefinitely without depleting resources or accumulating wastes.
- **Carbon Neutrality** – zero net carbon release, brought about by balancing the amount of carbon released with the amount sequestered or offset.
- **Carbon Offset** - the purchasing of carbon reductions deemed to be equivalent to the carbon emitted.

- **PoO** – Point of Obligation. The point in the economy where the obligation to meet ETS requirements is placed. For example, in the liquid fuels sector, the major oil companies are the most likely to be 'obliged' persons, with the point being the same places where excise taxes are collected.
- **CDM** – Clean Development Mechanism, an arrangement under the Kyoto Protocol allowing industrialised countries with a greenhouse gas reduction commitment (called Annex 1 countries) to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries.

Vision

The Green Party envisions a world where all people live in harmony with the environment and where natural ecosystems flourish. Collectively we understand the dangers of man-made emissions that destabilise the world's climate and we co-operate at local, national and international levels to control our greenhouse gas emissions so that they do not negatively impact on global weather patterns, while at the same time avoiding unnecessary hardship.

Key Principles

The Green Party believes that:

1. Climate change policy should be guided by the science with the interests of the global community and environment ahead of the goal of economic growth
2. We must think long term and start early because of the lag time in climate effects.
3. We need to act quickly if we are to successfully limit global warming to 2 degrees C and prevent runaway climate change.
4. Total global emissions must be reduced quickly and converge to emission quotas that are based on equal per capita entitlements. (A process known as contraction and convergence)
5. In order to achieve the necessary permanent reductions in greenhouse emissions all countries must be part of a binding international agreement that sets regular targets for emissions and monitors compliance with them.
6. Those countries with the highest per capita emissions must do the most to reduce their emissions.
7. Those sectors with the ability to reduce their emissions or to switch to non-emitting activities must do so as quickly as possible.
8. All sectors of the economy should cover the overall cost to the taxpayer of their emissions and do this in a fair and equitable manner, with no free riders.

9. The Government must use any income from a price on carbon, both to assist the transition to a low carbon economy and to protect low income and other vulnerable sectors of society from the effects of the resulting increases in energy and fuel prices.
10. Real local emission reductions should always be prioritized over offsets.
11. To manage climate change emissions we require complementary price and regulatory mechanisms as well as individual and community action.
12. Efforts to reduce domestic emissions must not be at the expense of other environmental values such as biodiversity.
13. Government must invest in research and development into the production methods and mitigation technologies to enable a successful emissions reduction programme (especially in energy production, forestry, and agriculture)
14. As some warming is inevitable, adaptation must go hand in hand with mitigation efforts.

Policy Points

1. Targets and Agreements

A. Domestic

The Green Party will:

1. Support a 90% reduction in emissions from 1990 levels by 2050. This target will include at least 60% domestic reductions, with the balance obtained from purchasing validated, real reductions from overseas.
2. Support an interim target of 30% by 2020 to ensure that New Zealand remains on track. Early reductions have a greater net benefit to the environment.
3. Review New Zealand's progress towards these national targets and technology incentives every two years in order to keep up with the latest ethical developments in science and technology.

B. International

New Zealand's status as a developed "northern hemisphere" economy, as well as its status as a colonised "southern hemisphere" nation coping with indigenous issues, place it in a unique position to bridge the divide in international climate change negotiations.

The Green Party will:

1. Work with all countries to negotiate a much stronger binding agreement for post-2012, which must involve all nations accepting

- obligations on per capita entitlements and reducing total emissions quickly.
2. Make every effort to persuade the US to join an international carbon emissions reduction agreement.
 3. Support the development of an international oil depletion protocol, to assist countries to achieve domestic targets and guarantee equitable access to the world's remaining oil and other fossil fuel reserves.
 4. Negotiate internationally to have the carbon sequestered in timber products recognised and deducted from deforestation liabilities in order to encourage timber in construction.
 5. Ensure that all our international trade agreements uphold the principles of Kyoto.
 6. Support international action for the immediate protection of the world's remaining indigenous forests.

2. Reducing our Emissions.

About half of New Zealand's emissions come from farming (from methane and nitrous oxide) and half from the energy and transport sector (from burning fossil fuels). Our ability to reduce emissions varies from sector to sector. There are renewable alternatives to fossil fuels, so the energy sector can provide most of our emissions reductions. However, all sectors, whose activities contribute to climate change, should face the price of carbon to some extent.

A. Supporting Research and Development

Research and development into emissions reductions in agricultural production, land use and forestry is potentially the most effective contribution to the science of climate change and adaptation, so strong ethical leadership in this area is critical.

The Green Party will:

1. Accelerate research into mitigating agriculture's GHG emissions.
2. Support more research into organic and other transitional forms of sustainable agricultural production in New Zealand that have better soil-carbon management, less intensive ruminant livestock management, and other methods of reducing carbon emissions from agriculture.
3. Expand research into soil sequestration of carbon to include both biochar and ways of counting the benefits of organic soil management systems with high biological activity .
4. Support and fund research & development of benefit to the forestry industry, including:
 - i. Funding research and development of projects to use of wood waste as an energy source

- ii. Developing and promoting wood as an alternative to energy intensive building products, such as steel and concrete, both of which create high levels of emissions in their manufacture.
- iii. Funding research and development into converting lignin and cellulose from wood into fuels, chemical feedstock and other products to replace oil and coal derived materials

B. Energy

The Green Party will ensure that all energy is used much more efficiently. We will phase out fossil fuels and develop new renewables, as energy from renewables can provide all our power needs. We also believe that the best way to reduce emissions from mining and burning coal is to leave the coal in the ground, regardless of who it is exported to and will support a transition to phasing out coal mines.

For our policies on hydro, wind, geothermal, biomass and marine energy please see our [Energy Policy](#).

The Green Party will:

1. Fully fund the New Zealand Energy Efficiency and Conservation Strategy, then find and fund the delivery of all energy efficiency measures that are more cost-effective than new supply, including environmental costs.
2. Close the loopholes in the Renewable Preference exemptions that allow almost any kind of thermal generation to be built.
3. Phase out fossil fuels, starting with coal which is the worst. No new coal mines will be consented except for small quantities of specialty coals such as for carbon fiber and activated carbon.
4. Allow existing mines to run their course, so that coal mining phases out at the rate of workforce attrition, with the emphasis on thermal coal for power stations going first, and coking coal for steel-making later.
5. Not support any conversion of coal to liquid fuels.
6. Not support any investment in the technology of carbon capture and storage, though if it is successfully developed, we will encourage its use for process emissions in industries which cannot avoid them, such as cement and steel.
7. Design a mechanism to discourage export of coal when it is exported to a non Kyoto country during KP1, as export coal is outside the ETS.

C. Transport

New Zealand's heavy reliance on the car mean that transport is one area where significant emissions reductions can and should occur.

The Green Party will:

1. Adopt urgent measures to improve vehicle efficiency, setting an average fuel efficiency standard for all new light vehicles entering the country to ensure NZ to catches up with the European Standard by 2018.
2. Raise the standard for used vehicles entering the fleet so that by 2018, used vehicles will need to average the standard set in 2014 for new vehicles.
3. Reduce vehicle kilometres travelled by supporting cycling, walking, affordable and efficient public transport, car-pooling, video conferencing and better urban planning.
4. Reject the use of biofuels which are made from, or compete with, food production; use genetically modified organisms in their production, or are produced by clearing biodiversity such as old growth forests. Instead, support the development of sustainable, locally produced biofuels from waste products and other sustainable sources as these provide substantial carbon reduction compared with petroleum fuels.
5. Shift funding from new roading, especially urban motorways, into the redevelopment of our rail and coastal shipping infrastructure, and to provide increased funding for public transport, including electric rail, so that users find the system efficient, sufficient, and a low cost way to travel.

Our [Transport Policy](#) contains a detailed plan of action.

D. Agriculture and Forestry

New Zealand has a unique emissions profile compared to other OECD countries because agriculture produces about half of our climate changing emissions. Contrary to what is often claimed, agriculture has options for reducing emissions, in ways that are sustainable, many of which are cost effective for farmers. The simplest option is for farming to de-intensify and diversify into a range of land uses.

Dairying is a significant contributor to our national emissions. The Green Party believes that further conversion of agricultural land to intensive dairying needs to be limited and ways of reversing unsustainable dairy conversions should be explored. Farm forestry needs to become an integral part of farm operations.

See our [Agriculture](#) and [Forestry](#) policies for more details

The Green Party will:

1. Require agriculture to take responsibility for its nitrous oxide emissions, where they do have options, in 2010.
2. Support the introduction of emissions reduction practices and technologies for agriculture that have been shown to be appropriate, safe and not harmful to animal welfare, such as; lower stocking rates,

- temporary stand-off pads during wet months, herd homes, improved drainage (excluding wetland areas) , GMO free biodigesters, soil carbon management, sustainably produced supplementary feeds, biochar and other measures
3. Concurrently promote and provide incentives for farmers to adopt measures that re-establish the sustainable nature of agriculture such as farm forestry, mixed farming, use of complex mixed swards, and organic production.
 4. Encourage councils to require land use resource consents for conversion to dairying
 5. Expand the Permanent Forest Sinks Initiative PFSI to value soil, water and wildlife benefits as well as carbon storage.
 6. Invest in better management of the carbon stores on conservation land.
 7. Promote and encourage longer rotation plantation species as an alternative to *Pinus radiata*.
 8. Ensure that the Crown covers the full cost to the taxpayer of deforestation for this current harvest cycle of pre-1990 forests on any Crown land with crown owned forestry leases that has been returned to Maori as a Treaty settlement.
 9. Move as quickly as possible to develop a National Policy Standard on biodiversity in order to protect biodiversity in regenerating forest and promote diversification in afforestation.

3. Carbon Markets

The Green Party believes that putting a price on greenhouse gases is desirable to reduce emissions, as well as to incentivise energy efficiency and renewables. Our strong first preference is for a carbon charge, recycled into income tax reduction for all taxpayers, and into funding carbon abatement. However there is currently little chance of this happening in NZ, so we will work to improve the Emissions Trading Scheme (ETS) put forward by Government.

In this context, the Green Party will:

1. Require consistent emission reporting standards (input methods) for the voluntary market
2. Support legitimate voluntary carbon markets to an international standard, not a domestic hybrid.
3. Support market mechanisms that seek primarily to create genuine emission reductions rather than just profits.

The Green Party will reform the ETS in the following ways:

4. Set a domestic cap on emissions, which will require some of the reduction to take place within NZ. This will be done by limiting the

- quantity of overseas credits purchased as a proportion of the credits that must be surrendered.
5. Link our ETS to overseas carbon markets such as the EU, where they are soundly based, to boost market confidence and liquidity.
 6. Bring Transport into the ETS as planned in 2009, but with phased allocation.
 7. Ensure that the taxpayer's liability in 2012 is covered by emitters as quickly as possible.

4. Adaptation

Adaptation to climate change will be essential as many significant changes to our climate are already happening. While central government action is key to our international engagement and overall policy development, the Green Party recognizes that local government will be the key partner in actually delivering on any adaptation strategies.

A. Social Adaptation

The Green Party will assist low income and vulnerable sectors of society to adjust to the resulting changes in the economy by:

1. Making appropriate adjustments to the tax system
2. Indexing benefits and the minimum wage to the costs of food, housing, electricity and transport fuels (ensuring that benefits and minimum wage are indexed to a CPI which reflects the costs of basics such as food, housing, electricity and transport fuels)
3. Improving energy efficiency and affordability for low-income households through the \$1 billion home insulation fund that the Green party has set up through the ETS. In addition we will promote progressive pricing, clean and efficient heating devices and other measures to save on energy use as detailed in our energy policy.
4. Providing a rebate on the cost of a home energy audit, when participating in a government sponsored energy efficiency scheme, on the proviso that the recommendations of the audit are implemented.
5. Developing a programme that ensures that every home in NZ meets minimum energy performance targets through insulation and energy efficiency retrofits by 2018
6. Running public education programs to educate the public on ways of saving energy and reducing emissions.
7. Ensuring the long-term security and affordability of the food supply in response to changing climatic conditions and growing seasons. See our Food Policy
8. Ensuring economic and social equity are key goals of wages, welfare, housing, transport and health policies.
9. Expanding public transport options and encouraging mode shift.

10. Restricting the cost of intra-city commuter public transport to encourage the shift from motor vehicles and protect the public from rising oil prices.
11. Working proactively with Pacific nations to help with mitigation and adaptation, potentially integrating them into our voluntary ETS and carbon markets as well as assisting them in providing credible and verifiable reductions via the CDM.
12. Developing a National Policy Statement under the RMA on sustainable urban form that is transit- cycle- and walking-oriented, not car oriented
13. Supporting community economic development, transition town and other initiatives aimed at reforming local economies towards a low carbon and less fossil fuel dependent future.
14. Encouraging urban, provincial and rural housing design and developments which promote transport modes and living arrangements which will meet both human and environmental needs in a future affected by the impacts of climate change and peak oil.
15. Require regional, unitary and territorial local authorities to incorporate climate change into their planning processes and implementation, prioritising coastal areas.

B. Environmental Adaptation

Climate changes threaten the survival of many species and ecosystems.

The Green Party will:

1. Fund research to identify the most at risk species and ecosystems in New Zealand
2. Research the impacts of climate change on biodiversity, both on land and at sea.
3. Support mechanisms, such as the protection and restoration of ecological corridors, to maintain and enhance the ability of indigenous species to respond or adapt to climate change.
4. Research the impacts of climate change on primary production such as rainfall, pest and ocean acidification.
5. Provide guidance to local authorities to plan long-term adaptation to sea level rises.
6. Ensure that DoC and other Crown assets are managed in a manner that supports ecosystem and species adaptation.
7. Apply the precautionary principle and rigorous analysis to any plan to apply geo-engineering or other technologies to combat climate change.

C. Economic Adaptation

There are many sectors of society that will be affected economically as we move to a low carbon economy. Those who are most vulnerable must be assisted to adapt.

The Green party will:

1. Create high-level government and industry sector groups to investigate and make recommendations on how to manage peak oil and climate change.
2. Selectively impose a carbon tax or other suitable instrument on energy intensive imports from countries whose industries do not face the price of carbon, in a manner consistent with that proposed by the EU. Such an initiative would be phased in during KP2.
3. Shift the economies of communities dependant on coal away from coal mining by requiring Solid Energy, a Crown Owned Enterprise, to fully rehabilitate all old mining areas, simultaneously wind down its coal mining operations and expand its wood pellet and other biomass fuel operations, and thus not provide further fuel for global warming.
4. Create a contestable fund for local government and community group adaptation projects.