

Climate Change

HIGHLIGHTS

Labour will:

- Ensure a just transition to a sustainable low-carbon economy with decent and secure jobs and, as a key to achieving ambitious emissions reduction targets, will establish an independent Climate Commission and carbon budgeting
- Restore the Emissions Trading Scheme (ETS) to putting an effective price on carbon, so that we move away from carbon-polluting goods and services towards low or zero-carbon options
- Make New Zealand a leader in the international fight against climate change, and in ensuring that the 2015 Paris Agreement is successfully implemented

Introduction

Climate change is the world's most critical sustainability issue. It is occurring rapidly and is a severe threat to the planet and to the future of humans and other species. Record high temperatures are occurring every year and sea level is rising. To avoid the worst effects of climate change, the 2015 Paris Agreement committed the world to holding the increase in global average temperature to well below 2°C compared with pre-industrial levels. Climate action is also one of the United Nations' Sustainable Development Goals for the period to 2030.

Although the planet is already over halfway to a 2°C increase, the Paris commitment can be achieved through a rapid but just transition to a low-carbon economy.¹ Crucially, fossil fuels need to stay in the ground. Carbon neutrality needs to be achieved worldwide in the second half of this century, with no more greenhouse gases being emitted to the atmosphere than are removed from it.

The disruption and hazards that climate change is bringing to New Zealand include changing rainfall patterns, more intense weather events, more frequent serious droughts, and coastal inundation. The environmental and economic costs are increasingly apparent. There are also major social and public health implications.

On a per capita basis, New Zealand is one of the developed world's highest greenhouse gas emitters. A Labour government will make our country a leader in the international fight against climate change. To put our own house in order, we will have a comprehensive climate change response plan. Our mitigation and adaptation policies will of themselves improve people's lives and enable them to live in sustainable ways. We will ensure a just transition away from an economy heavily reliant on fossil fuels to one based on clean energy and green technology. This transition will be supported by an effective price on greenhouse gas emissions.²

¹ "Low-carbon" is a shorthand reference to reducing all greenhouse gases. In a typical developed country, the predominant gas is carbon dioxide; whereas in New Zealand there are two main gases, carbon dioxide and methane. Labour's *Energy* policy focuses on reducing carbon dioxide emissions from energy generation and use.

² Greenhouse gas emissions are also referred to in this policy as simply "emissions". New Zealand's emissions profile comprises 45% carbon dioxide, 43% methane, 10% nitrous oxide, and 2% synthetic gases. By sector, agriculture contributes 48% of our

Taking a cross-party approach

Climate change is such a serious threat to the well-being of Kiwis as to justify a cross-party approach to deal with it. Labour will work with all those who recognise the urgent need for New Zealand to take action based on scientific evidence about the environmental, economic and social impacts of climate change – in order to achieve long-term, stable, and effective policies to combat it.

The potential of cross-party co-operation was demonstrated in March 2017 by the *Net zero in New Zealand* report on achieving neutrality in domestic GHG emissions. This was produced by Vivid Economics for GLOBE-NZ, a cross-party group of 35 MPs.

Labour will:

- Work with all those who recognise the urgent need for New Zealand to take action to combat climate change
- Initiate a non-partisan, cross-party, collaborative approach drawing on the best minds from every political party, the wider community, and specialists outside Parliament.

Ensuring a just transition to a sustainable low-carbon economy

Our response to climate change will drive one of the most significant economic transformations in modern history. We must have a plan to address the challenges posed, and create new opportunities for our businesses and industry – and secure the jobs of the future.

Economic transitions can cause major economic and social disruption. They have too often been done poorly in New Zealand, with workers and communities bearing the brunt. It does not need to be that way. A transition can be made equitably to achieve positive outcomes for workers, enhance communities and create new areas of growth.

Labour will provide leadership for a just transition to a low-carbon and climate-resilient economy – one that maximises the benefits of climate action while minimising shocks and hardships for workers and their communities. The transition will take full advantage of New Zealand's plentiful renewable resources and of existing and emerging technologies worldwide.

While climate change is a big challenge, it is also a big opportunity. The progressive uptake of low-carbon technologies will create jobs, strengthen local economies, and help us safeguard New Zealand's future energy security. Low-carbon skills, goods and services are increasingly valuable in a world looking for solutions in areas such as renewable energy and lower agricultural emissions.

Proper planning will ensure a just transition is managed in a fair and just manner, where affected workers and communities are supported to find secure and decent jobs in the new low-carbon economy. In order that the necessary education and skills training occurs, there must be good workforce planning. This is critical for ensuring that individuals and communities are well-placed to benefit from the transition.

The transition to a low-carbon economy will need every sector of the economy to do as much as possible to reduce its greenhouse gas emissions – energy, transport, industry, agriculture, waste -urban and rural. This will include a focus on energy efficiency and renewable energy,

emissions (mainly methane and nitrous oxide), energy and transport 40% (both mainly carbon dioxide), industry 7% (mainly carbon dioxide and synthetic gases), and waste 5% (mainly methane).

support for public transport and alternatives to road freight such as rail and coastal shipping, a clear strategy for forestry, and the promotion of research and development into reducing emissions.

Co-benefits of reducing our emissions include lower imported oil costs, reduced fuel bills for our vehicles, better quality homes that are warmer and drier, more efficient industrial and agricultural production, and less nutrient and livestock pollution of our waterways.

Labour will:

- Provide leadership to ensure a just transition to a low-carbon and climate-resilient economy
- Implement a just transition plan, the development of which will be coordinated by the Climate Commission, and which will involve the whole of government and the community
- Ensure that the plan optimises the economic development opportunities of a low-carbon economy, and provides the workforce with the skills training required to benefit from the opportunities
- Lead by example through government investment in sectors such as transport and energy, and by requiring state-owned enterprises and other government organisations to actively pursue low-carbon options and technologies.

Establishing carbon budgeting and an independent Climate Commission

New Zealand's rising gross emissions have for some time been offset by carbon sequestered in plantation forests. However, many of these forests are due to be harvested in the next 10 to 15 years, creating a major liability for a 2020s government. Access to international emissions markets to meet the shortfall will become increasingly expensive as carbon prices rise.³

We must greatly reduce our domestic emissions, and plant more forests to absorb them, as a part of keeping green jobs at home and future-proofing our economy. Carbon budgeting enables the preparation of a clear and considered low-carbon transition plan to achieve our targets and de-risk our position.

As a key to achieving emissions reduction targets, Labour will establish an independent Climate Commission tasked with running the carbon budgeting process. The Commission would transparently provide advice to the government on significant but feasible emissions reduction targets and measures to achieve them. Carbon budgeting will put outcomes first – taking the targets, and then assessing the lowest cost options available to achieve them, and setting an overall plan for doing so.

A carbon budgeting process based on, for example, a five yearly budget cycle removes the short-term thinking of a three year electoral cycle. The process must be independent of the government of the day. Advice and recommendations must be able to be put in the public arena fearlessly and promptly, free of Ministerial or political influence or direction.

The Climate Commission would carry out carbon budgeting in tonnes of carbon, not dollars or New Zealand Emission Units (the locally generated carbon credits, known as NZUs). The

³ This shortfall is currently expected to cost New Zealand \$14.2 billion over the 10 years from 2021–2030, based on an assumed carbon price of \$50 per tonne. This cost is described by government officials as “a significant transfer of wealth overseas”. See Parliamentary Oral Question 4, 23 May 2017.

Commission would detail the expected carbon flows, and practical actions and tools (such as the ETS) for reducing them. The carbon budgeting process would allow for integrated planning that does not silo climate change away from energy, transport, forestry and other relevant policy areas.

The Climate Commission would work with stakeholders across all relevant sectors to explore options and their costs, and develop sector plans that feed into an overall carbon budget and low-carbon transition plan – and would then present the government with a clear pathway forward.

Labour will:

- Set ambitious, and legally binding, emissions reduction targets and carbon budgets
- Legislate to establish a Climate Commission –akin in independence to the Reserve Bank or the Parliamentary Commissioner for the Environment (PCE)
- Empower the Climate Commission to recommend what the emissions reduction targets should be over time, and identify the financial and other consequences of achieving them or not
- Mandate the Climate Commission to set up and run a carbon budgeting process for achieving the emissions reduction targets and coordinating development of a just transition plan
- Adopt carbon budgets and a just transition plan that will deliver on the emissions reduction targets, with the Climate Commission tracking and reviewing the targets and the effectiveness of the plan and its sectoral parts.

Labour has been advocating for carbon budgeting and an independent Climate Commission since 2014. Our proposals are similar to what Generation Zero and many other NGOs are calling for, and also similar to recent recommendations from the PCE.⁴

Emissions reduction targets

While Labour will be guided by the Climate Commission on what New Zealand's emissions reduction targets should be, we would want more ambitious ones than National has set.⁵

Labour will set a target of net zero carbon emissions by 2050. Interim targets to this one will be set according to the recommendations of the Climate Commission to ensure we can achieve the 2050 target. Achieving the targets will require technological developments in the energy and agriculture sectors, coupled with a more diversified pattern of land use including increased forestry.

Labour will:

- Set a legally binding target of net zero carbon emissions by 2050
- Set interim reduction targets based on recommendations of the Climate Commission in order to achieve our 2050 target.

⁴ PCE, *Stepping Stones to Paris and beyond, Climate change, progress, and predictability*, July 2017.

⁵ Under the Paris Agreement, New Zealand through the National government has committed to reduce its greenhouse gas emissions by 30% below 2005 levels by 2030, a target equivalent to an 11% reduction below 1990 levels. For 2050, National's target is a 50% reduction below 1990 levels. These targets compare (later) net emissions to (earlier) gross, so the 2030 target does not actually reduce net emissions from their current (2015) levels. The 2050 target would reduce net emissions by 43% from their current levels or 6% of 1990 levels. The EU has committed to a reduction of at least 40% below 1990 emissions levels by 2030, and an 80–95% reduction by 2050. A net zero emissions target would mean a 100% reduction in net carbon emissions by 2050.

Work by Vivid Economics has shown that a net zero 2050 target is achievable if we invest in forestry and new technologies. It is likely our reduction targets will achieve faster reductions of long-lasting gasses such as carbon dioxide and nitrous oxide before those with a shorter lifetime such as methane. Our interim targets are likely to be set in comparison to 1990 emission levels in line with international reporting.

Restoring the Emissions Trading Scheme

The New Zealand Emissions Trading Scheme introduced by Labour in 2008 was, by international standards, advanced. It included all gases covered by the Kyoto Protocol and was to encompass every sector of the economy. The ETS charged polluters for increases in emissions and rewarded those who cut emissions.

National gutted the ETS, rendering it ineffectual. This included putting a price ceiling on carbon but no floor, halving the amount of emission units that must be paid for (being phased out by 2019), and indefinitely deferring the inclusion of agriculture. And National cynically allowed an influx of cheap, imported, essentially fraudulent international emission units that collapsed the price of the local emission unit, the NZU.

Labour is committed to achieving a lasting consensus among New Zealand's main political parties on an ETS. The architecture of the ETS is still intact and it can be readily restored to being fully effective. This includes an orderly phase-in of carbon prices to their optimal level, avoiding undue price fluctuations, and building long-term confidence in the ETS especially with foresters.

Free NZU allocations should continue for emissions-intensive and trade-exposed (EITE) activities, such as steel and aluminium, on the basis that there is no point in driving such industries offshore to produce the same or more emissions elsewhere.

Labour will:

- Restore the ETS so that it does what it was intended to do – put a price on carbon that drives behaviour change away from carbon-polluting goods and services towards low or zero-carbon options
- Not allow the importation of international units until it is clear that they have environmental integrity, are from a reputable source and a mature international market, and are realistically priced; and for the foreseeable future will manage access to any such units through direct acquisition by the government
- Require at least 50% of all units surrendered to meet obligations under the ETS to be NZUs
- Bring agriculture within the Emissions Trading Scheme within our first term with a free allocation of 90%
- Promote confidence in the ETS by having the Climate Commission, or the Ministry for the Environment, provide ongoing guidance about anticipated future carbon prices, including on a price band with ceiling and floor; and advice on what if any changes should be made to free allocation for agriculture and EITE activities
- Be open to a science-led discussion as to how New Zealand, in accounting for its overall greenhouse gas emissions, should differentiate between short-lived gases such as methane compared with long-lived gases such as carbon dioxide and nitrous oxide.

Agriculture

At 48% of the total, agricultural gases are the country's largest source of emissions. While addressing this is challenging, failing to do so will increasingly put at risk our international reputation for sustainability and responsibility. Farmers in particular will become vulnerable to reputational damage. Including agricultural gases in the ETS will encourage innovation and ensure that these emissions are properly considered in plans for intensification or de-intensification, or other land use choices that cause or limit emissions.

Emissions per unit of livestock production have decreased due to better productivity per animal and more efficient farming systems. Further significant decreases are achievable and the Pastoral Greenhouse Gas Reduction Consortium is working on techniques for delivering these.

Having agriculture in the ETS will encourage consideration of the role that different biological processes and production systems – e.g. based on organics, or alternative herbage systems, or horticulture rather than livestock – can play in creating greater value and reducing emissions.

The default point of obligation will be at processor level, with an ability to opt-in at farm level where practicable. This would recognise those farmers who want to accurately measure their own carbon inputs and outputs, including pasture, soil carbon, farm forestry, fertiliser, and ruminant emissions.

Labour will:

- Follow best international science and practice on reducing agricultural emissions
- Explore the potential of different land-use choices, biological processes and production systems for both reducing emissions and being profitable
- Investigate how best to measure and take account of the carbon cycle, between land and the atmosphere, as it relates to agriculture
- Ensure that farmers operating at best practice are recognised and advantaged, for example by being able to have their point of obligation for emissions measured at farm level where practicable, so they can be directly credited for emissions reductions they achieve.

See also “Carbon farming” under *Promoting research and development* below.

Keeping climate change central to government thinking

Some issues are considered to be of such cross-government importance that there is a standing requirement for Cabinet policy papers on any topic to report on the implications for issues such as human rights, gender, and disability. Given the existential threat that climate change presents, it should be added to this list.

Policy papers where climate change implications would be relevant include those about transport, energy and urban planning. If, for example, there were a proposal for a major roading or public transport project, the implications for climate change mitigation would be reported on.

Labour will:

- Put climate change mitigation and adaptation at the forefront of government decision-making, funding allocation, and reporting
- Require climate change implications to be reported on in Cabinet papers, other appropriate policy papers, and accompanying regulatory impact statements
- Establish a Youth Climate Change Challenge. Young people from Year 7 on will be able to participate in projects to tackle emissions in their communities. Each year, the children with the best ideas will be invited to meet the Prime Minister to discuss climate change.

Promoting research and development

There are significant opportunities for New Zealand from research and development into emissions reduction and low-carbon technologies, especially in sustainable agriculture and renewable energy. We already have world-leading expertise in geothermal, hydro and wind.

It would be beneficial to establish a Transitions National Science Challenge to consider the science, research and development required for the transition to a low-carbon economy. The Challenge would involve industry training providers, so that necessary skills are developed in tandem with new technologies and opportunities.

Labour will:

- Support more research into ways of reducing greenhouse gas emissions, especially in sectors where significant reductions in emissions are currently challenging, such as agriculture
- Work with the research community to further develop and consolidate capability in renewable energy, energy efficiency and low-carbon technologies, including innovative solutions to reduce emissions from transport and stationary energy
- Seek to develop New Zealand expertise in marine generation and deep geothermal
- Work to ensure that New Zealand gets maximum value from its existing and developing expertise in renewable energy and clean technology, with this expertise being productively applied here at home and exported around the world
- Establish a Transitions National Science Challenge to consider the science, research and development required for the transition to a low-carbon economy.

“Carbon farming” is a biological process that aims to store more carbon in soils through no-tillage and other techniques. Such sequestration of carbon provides a huge potential opportunity for carbon storage. This “soil first” approach is said to also lead to better soil health and resilience, higher plant growth and productivity, and reduced siltation and nutrient pollution of waterways. If research can resolve issues such as measurement and verification, sequestration of carbon in soil should be included in the ETS.

Labour will:

- Promote research on the potential of carbon farming to sequester carbon in soil, and on how this could be included in the ETS and carbon farming developed.

Achieving the potential of forestry

As trees grow, they absorb carbon dioxide from the atmosphere and store it as wood (with forests sometimes being referred to as “carbon sinks”). When forests are felled, that carbon is

released. Forestry is rewarded under the ETS because it has a big role in helping New Zealand reduce its overall greenhouse gas emissions. Forestry can also provide feedstock for biofuels.

In order to achieve the full potential of forestry as a carbon sink, we need a clear strategy for it. At least a million hectares of marginal agricultural land has the potential to revert to shrubland and native forest. More pine or other exotic plantation could also be established, which if replanted upon harvesting would keep carbon stored.

Initiatives to encourage the planting of forests include the Permanent Forest Sink Initiative (PFSI) which enables land owners to receive carbon credits for the creation of permanent forests, including naturally regenerating indigenous forests. We need to ensure that the initiatives are working optimally. Trees vary in their ability to capture and store carbon. There are also biodiversity issues to consider when determining the optimal mix of planting.

An area to investigate is whether carbon credits should be made available to the Department of Conservation under the PFSI for increased carbon storage in its indigenous forests resulting from comprehensive pest control. Riparian planting may also provide opportunities.

Labour will:

- Ensure that there is a clear strategy for forestry as a carbon sink
- Encourage increased forest cover, underpinned by long-term confidence in a restored and effective ETS
- Encourage landowners to plant forests as carbon sinks, particularly on marginal or vulnerable land, and provide incentives and information on suitable trees to plant
- Review the PFSI to ensure its optimal performance, including for the planting or enhancement of indigenous forest that will not be harvested, and in opportunities for riparian planting to qualify for carbon credits
- Work to maximise the biofuels potential of forestry.

See also Labour's *Forestry* policy.

Complementing the ETS with other measures

While pricing greenhouse gas emissions properly through the ETS is essential for a just transition to a low-carbon economy, it is not the only measure available. Complementary measures already mentioned are: a focus on energy efficiency and renewable energy; support for public transport and alternatives to road freight such as rail and coastal shipping; a clear strategy for forestry; and the promotion of research and development into reducing greenhouse gas emissions.

Additional complementary measures and nationwide targets that Labour will pursue include:

- recognising the crucial role that smarter, greener cities will play in decarbonisation of the economy, given our predominantly urban population
- promoting city living that is far less car dependent (more walking, cycling and public transport) and with better and less energy-intensive buildings (both residential and commercial), all of which will make our cities more attractive places to live in

- at least 90% of our electricity coming from renewable sources by 2025, with close to 100% being renewably generated by 2040⁶
- adding climate change mitigation and emissions reduction, and energy efficiency, to the objectives of the Electricity Authority
- slashing transport emissions through fuel efficiency standards for imported vehicles, a substantial uptake of electric vehicles (EVs) both light and heavy, and alternative fuels such as biofuels and hydrogen
- promoting clean industrial heat and a move away from the use of thermal coal.

See Labour's *Energy, Transport and Housing* policies for more detail.

Honouring our international obligations

Labour is committed to the goals and principles of the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. But the Paris Agreement itself is only a beginning. Strong, committed and consistent international leadership and action will be required to ensure the Agreement's successful implementation. New Zealand will play its full part in this, and not merely be a "fast follower" as the current government has wanted to be.

The decision of the United States administration to withdraw from the Paris Agreement is unlikely to stop the international impetus to make it succeed. Climate action and the clean energy revolution will continue – with the EU, China and other countries taking the political lead.

As articulated by the New Zealand College of Public Health Medicine, climate change is contributing to the global burden of disease and premature death; and will almost certainly lead to food and water shortages, increased mental health issues, more injury and illness, and more heat-related deaths and illness from extreme weather.

A particular climate action obligation for New Zealand lies with the severe public health impacts of climate change within low-lying areas of the Pacific region.

Labour will:

- **Seek to play a leading role in international climate change negotiations and action that builds on the Paris Agreement**
- **Support our Pacific neighbours and other developing countries in their efforts to adapt to climate change.**

Adapting to a changing climate

Even with meaningful climate action, there are still some unavoidable consequences of climate change that we need to adapt to, especially inundation and flooding risks. The impacts can be lessened with forethought, good information, and careful planning. But leaving the adaptation burden entirely to local authorities would result in piecemeal planning and decision-making.

⁶ "Close to" is possible, noting that geothermal releases some carbon dioxide during brine extraction, and that some thermal back-up may be necessary (although this could be biomass) to meet peak seasonal demand, especially in dry hydro years.

Central government has the capacity to assess which regions face the greatest or most urgent risks, to provide reliable and up-to-date information for local authorities to take into account in their infrastructure and planning decisions, and to lay out the range of options available to help communities adapt to changing climate.

Labour will:

- Ensure high quality central government direction and guidance on sea level rise and other consequences of changing climate, so that a consistent approach is taken throughout the country, albeit adapted to local circumstances
- Establish, under the leadership of the Minister of Finance, a working group to assess and prepare for the economic and fiscal implications of sea level rise
- Assess and plan for the risks of changing climate on health, agriculture, food security, water security, property, insurance, public infrastructure, and daily life
- Lead a climate change adaptation management plan in close cooperation with local government, the agriculture, fisheries and forestry sectors, Māori and other stakeholders
- Provide a fund to enable local and regional bodies to collaborate in researching, prioritising, and planning mitigation of extreme weather effects resulting from new weather patterns caused by climate change
- Devise best practice response and communication strategies for extreme events that enable authorities to decide which actions will achieve the most life and property sustaining outcomes
- Commence an urban redevelopment and adaptation programme, with a focus on South Dunedin and other urban communities subject to sea level rise – working with those communities, their local authorities and other stakeholders.