



Our
Climate
Your Say!



Join the
conversation...



Ministry for the
Environment
Mānātā Mō Te Taiao



Our Climate. Your say!

Over the past summer, many New Zealanders have experienced the changing climate in their everyday lives. The seas we swam in were warmer than anyone could remember. We had months of almost uninterrupted spectacular weather.

I say 'almost' because it was interrupted by a severe storm in January and two Pacific cyclones in February – Gita and Fehi. Roads were washed into the sea in the Coromandel, Auckland's Tamaki Drive was flooded (again) and Golden Bay saw huge landslides and damage to crops.

New Zealand has always had dramatic weather. But the frequency and the severity of storms, coastal and river flooding, droughts, and wildfires are increasing. These will continue to increase, as long as people continue to add large amounts of greenhouse gases into our atmosphere.

The costs to us are also increasing. We are seeing lost agricultural production, flood clean-up costs, sea-wall and road reconstruction, and so on. Insurance

companies and banks are rethinking their risk profiles and premiums for coastal homes and businesses.

All of this sounds like a lot of bad news – but we now have many of the tools that we need to fix it. And, in doing so, we can grasp an extraordinary opportunity to upgrade our economy, not just to be ‘clean and green’ but also more productive, more resilient and better paid.

A new industrial revolution is taking place. This is happening, particularly in energy and transport, but also in every other sector of the economy, including agriculture.

Those leading the way are developing intellectual property, new technology and the products and services of the ‘low-carbon economy’. Those that do

not lead are letting the opportunity pass them by.

In New Zealand, investment has been held back by the lack of a clear position on climate change or any signal about the direction we want the economy to go in. Will we stick with our current reliance on traditional (and high pollution) technologies and products? Or will we commit to replacing those technologies with new, clean ones?

The Zero Carbon Bill is designed to create certainty. It is intended to provide a long-term and stable policy environment, with a clear emissions target and a guided pathway to get us there.

That certainty will drive investment in new industries and create new jobs

“I invite you all to be part of the conversation.”



to upgrade our economy. We have opportunities to increase our renewable electricity generation, plant more trees, invest in new technologies, continue our world-leading research into reducing emissions on our farms, and support the growing Māori economy.

The transition will affect every sector of the economy, but the change will be more far reaching in some than others. For that reason, we are absolutely committed that this transition will be planned, gradual and carefully phased in. We have had other transitions before, which were not well managed and led to displacement and upheaval. For this to work, we need to make sure we bring everyone with us and leave no one behind.

Message from the Minister

Cast your mind back 30 years, to 1988. The internet did not exist, at least not in its current form. But try to imagine running your school or your farm or your bank without the internet today. It has transformed every aspect of the economy – and our lives. It has been disruptive, and it has also created tremendous opportunity and whole new industries.

A planned transition over time gives us the best chance of minimising the negative social and economic impacts of change so it is just and fair for people, communities and regions. The longer we leave our planning, the more abrupt and difficult change will be. We want to avoid that risk.

We are not starting from scratch. Nearly 10 years ago, the then Prime Minister

Rt Hon John Key made a commitment to halve our emissions by the year 2050, and we have taken the first steps towards that.

But, in 2015, we, alongside almost all countries in the world, decided that the world should achieve net zero greenhouse gas emissions by the second half of this century through the Paris Agreement. This Government has committed to setting a net zero target for New Zealand to meet by 2050. We seek your views on what this target should look like during this consultation.

Setting a new long-term target will be a clear signal of our commitment to the Paris Agreement, including its collective goals and our own contribution to global action. Our implementation journey has begun. Many of New Zealand's largest

businesses have already gone 'carbon neutral', and many others are working on it.


Now is the right time to set a target of net zero and put in place the institutions and the strategy to reach it. At its core, this is what the Zero Carbon Bill does.

With this challenge comes opportunity. Together, we can build a more sustainable economy that ensures New Zealanders can prosper.

I invite you to be part of the conversation.



Hon James Shaw
Minister for Climate Change



**Tō tātou
āhuarangi
ō whakaaro!**

**Whakauru mai
ki ngā kōrerorero**

Our Climate. Your Say!

The Government is committed to acting on climate change. We want to build a more sustainable economy that is better for the environment, creates jobs and improves New Zealanders' lives. We also want to show global leadership by demonstrating to other countries that New Zealanders can be better off while taking action to reduce our impact on the climate.

Countries around the world emit greenhouse gases from activities like driving cars, farming, burning coal and deforestation. A big increase in human-made greenhouse gases has occurred in recent years, causing the global climate to change rapidly.

Each year, we are seeing more and more extreme weather events. Seas are rising. Our regions, businesses and communities have already seen costly damage and disruption. We are paying more to repair our roads and railways and to keep other vital infrastructure running. These costs will continue to increase over time.

In 2015, almost every nation decided to take action together to address climate change by adopting the Paris Agreement. It sets the world on the path

to net zero emissions by the second half of the century. Net zero means the emissions we create are no greater than what is removed from the atmosphere, from things like forests soaking up carbon dioxide. Many countries are transitioning their economies and will continue to in the years to come. A number have set long-term emissions reduction targets, including the United Kingdom (UK), the European Union, Canada, Sweden and Norway. The global economy will look very different by 2050, as a result.

Although New Zealand's share of global emissions is very small (0.17 per cent), countries like us make up around 30 per cent of total emissions. New Zealand's per capita emissions are high, compared with similar economies

in the Organisation for Economic Co-operation and Development (OECD).

The Zero Carbon Bill is an opportunity for New Zealand to decide how it delivers its part in the global effort while encouraging action by others. The Bill puts a new target in legislation that gives us certainty about our long-term goals. It creates the institutions to help us get there and to hold us to account. It can also put in place the plans we need to respond to the growing impacts of climate change. We want New Zealanders to help us decide the shape and form of this Bill.

Why we should take action

With action comes opportunity. By setting a long-term target, we will have time to adjust and to upgrade our economy. In 2011, New Zealand committed to reduce its emissions by 50 per cent below 1990 levels by 2050. Since then, we have ratified the Paris Agreement, which commits us to increasingly ambitious targets over time. Taking a fresh look at our 2050 target will bring us further in line with the Paris Agreement. A recent study from Westpac New Zealand found that taking early and planned action on climate change could save \$30 billion by 2050, compared with taking delayed, then abrupt action later.

Over 30 years, New Zealand's economy will change, just as it has over the past 30 years. Taking action now means that we can:

- reduce the potential for sudden, drastic economic shocks
- gain an economic advantage as an early mover in emerging markets
- get the most from wider benefits like cleaner air and water and better health
- meet international commitments and encourage other countries to meet theirs.

This is our chance to build a high value economy that will hold us in good stead for the future. By upgrading our economy and preparing for the future, we can help make sure quality of life continues to improve for generations to come.

Our Climate. Your Say!

A move to a net zero emissions economy that is resilient to climate change will deliver health and environmental benefits. The air we breathe will be cleaner. More people catching buses and trains more often will reduce traffic congestion in our cities. Better insulation in homes for energy efficiency will reduce heating bills and lead to health cost savings and a higher quality of life because houses will be warmer, drier and healthier than they are now.

More forestry, in the right places, will improve the health of our birds, fish and plants. It will also improve water quality in our rivers and lakes and prevent erosion. Stronger climate action can also drive faster innovation as people find new solutions to old problems, and create new jobs.

Many Māori enterprises are involved in natural resource management including forestry, agriculture and fisheries. There will be opportunities for the Māori economy through the transition.

What the transition to net zero emissions could look like

There are plenty of ways we can take action. We can increase renewable electricity generation, plant more trees, invest in new technologies, shift our cars and trucks to electric and invest in public transport. We can also continue our world-leading research exploring how to reduce emissions on farms.

Change is not new. Our agriculture sector has responded to constant land use and other change over the past 70 years and, as a result, we are considered leading edge, globally.

Our economy is already dynamic and constantly adjusting to change. Jobs are continually created and lost. For some of us, the changes through the transition could be small or not noticeable – we could be driving vehicles powered by 100 per cent renewable electricity. For others, the changes could be bigger. The transition will affect how we travel, use land and what we produce and consume. Other countries, such as the UK, have shown that it is possible to reduce their emissions while growing their economy and maintaining a high standard of living.

It is uncertain how the future will unfold. We have used a range of studies to help us examine the impact of moving to a low-emissions economy. These can help us look ahead, but each has different strengths and weaknesses. Looking out to 2050 becomes less certain.

The studies suggest changes will happen across all parts of our economy, including the following.

- As we reduce emissions, the economy will continue to grow but possibly less quickly. For example, if we make ambitious efforts to become a net zero emissions economy, gross domestic product (GDP) is estimated to grow by 1.9 per cent every year. This is compared with an estimate of 2.2 per cent every year if we did not take new measures to reduce emissions. It is highly unlikely that New Zealand will take no further action on climate change in the period to 2050, given the international commitment to the Paris Agreement.

- We will need to invest in innovation and plant a lot more trees, to ensure we maintain a strong economy over the coming decades.
- If we set a net zero emissions target – the most ambitious target – some sectors and industries could decline or change and new sectors will emerge, creating new jobs. Businesses with high emissions will face challenges if they do not reduce them. The make-up of the workforce in some regions could change as a result.
- Low income households are likely to be more affected financially. The Government is committed to supporting those disproportionately affected.

The economic analysis we commissioned highlights the costs of taking action. Recent analysis also suggests that limiting global warming to 1.5 degrees Celsius instead of 2 degrees Celsius by mid-century could lead to an increase in global GDP of 1.5 per cent to 2 per cent and avoids damages from climate change globally of around \$11 trillion to \$16 trillion.

Our Climate. Your Say!



Commitment to a fair and inclusive transition

We want to avoid sudden changes, by planning early. A planned transition over time gives us the best chance of minimising the impact on our jobs and livelihoods so it is just and fair for all New Zealand communities and regions. The Government is committed to this. Incorporating te ao Māori and kaitiakitanga (the concept of guardianship) in our approach, as well as working with industry across the agriculture, forestry, energy, transport and waste sectors, will help to get the transition right.

This could include training and upskilling people into new low emissions jobs and managing the timing of when policies would take effect. The Government is

already looking into what else we need to do to support vulnerable regions, workers and communities, given the potential changes in the economy. Preparing for the change, and investing in our progress will make the transition less disruptive.

What drives a smooth transition?

A recent report from the New Zealand Productivity Commission identifies the core building blocks to a low emissions future: emissions pricing, laws and institutions, regulations and policies, and the right innovation and investment settings. New Zealand is already making progress on these. For example, New Zealand was one of the first countries in the world to set up an emissions trading scheme.

The previous and current Parliamentary Commissioner for the Environment and the Productivity Commission recommend the Government sets out the laws and institutions for a low emissions and resilient future, as other countries have. The Zero Carbon Bill responds to these recommendations by proposing to:

- set targets to reduce our emissions
- introduce the stepping stones (or budgets) to reach these
- set up the institutions to provide independent, expert advice and hold governments to account
- better understand the risks and to plan for how we adapt to climate change.

Business as usual



More Extreme Weather

We Need To Get into Niche Markets NOW or we'll miss out

WE'RE ALREADY IMPROVING!!

BUT WE'RE NOT DOING ENOUGH

PROFIT MARGINS ARE SHRINKING IF we Don't MAKE MONEY
We CAN'T INVEST IN CARBON MITIGATION

LANDFILL

MORE DROUGHT

NZ IS BECOMING A REPUTATION FOR OUR CARBON ENGINES

we'll run out of SPACE to throw THINGS OUT

GOOD FARMERS AREN'T CELEBRATED NEARLY ENOUGH

I HATE BEING STUCK IN TRAFFIC
WHAT A WASTE OF TIME

RUNOFF = DIRTY RIVERS

COASTAL EROSION

HYDRO HYDRO ELECTRICITY

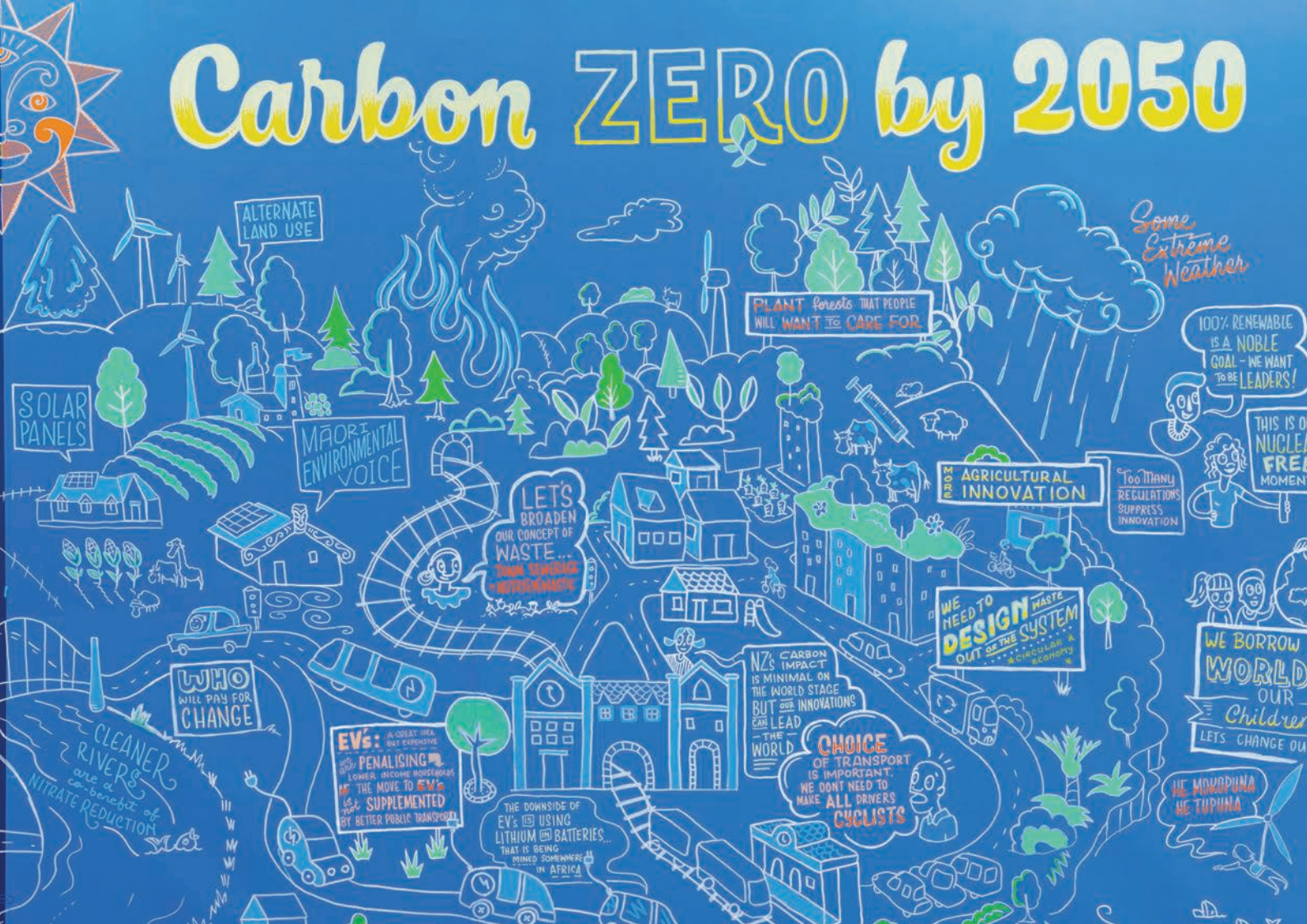
WE CAN GET TO 97% RENEWABLE ENERGY WITH CURRENT POLICIES

PETROL & DIESEL

PRIVATE VEHICLES

IT'S EASY TO STOP USING PLASTIC STRAWS
WASTE IS A SMALL PART OF CARBON CONTRIBUTOR EMISSIONS

Carbon ZERO by 2050



Carbon ZERO by 2050

SOLAR PANELS

ALTERNATE LAND USE

MAORI ENVIRONMENTAL VOICE

LET'S BROADEN OUR CONCEPT OF WASTE...
FROM WASTE TO WASTEWATER

PLANT forests THAT PEOPLE WILL WANT TO CARE FOR

Some Extreme Weather

100% RENEWABLE IS A NOBLE GOAL - WE WANT TO BE LEADERS!

THIS IS OUR NUCLEAR FREEMOMENT

AGRICULTURAL INNOVATION

TOO MANY REGULATIONS SUPPRESS INNOVATION

WE NEED TO DESIGN WASTE OUT OF THE SYSTEM
OF THE AGRICULTURE & ECONOMY

WE BORROW OUR CHILDREN
LET'S CHANGE OUR

WHO WILL PAY FOR CHANGE

EVs: A GREAT IDEA, BUT EXPENSIVE
PENALISING LOWER INCOME HOUSEHOLDS
IF THE MOVE TO EVs IS NOT SUPPLEMENTED BY BETTER PUBLIC TRANSPORT

NZ CARBON IMPACT IS MINIMAL ON THE WORLD STAGE BUT OUR INNOVATIONS CAN LEAD THE WORLD

CHOICE OF TRANSPORT IS IMPORTANT. WE DON'T NEED TO MAKE ALL DRIVERS CYCLISTS

THE DOWNSIDE OF EVs IS USING LITHIUM BATTERIES... THAT IS BEING MINED SOMEWHERE IN AFRICA

HE MOWOHUNA HE TUHUNA

CLEANER RIVERS are a co-benefit of NITRATE REDUCTION



What the Zero Carbon Bill could do

This Bill sets the long-term commitment to transition us to a low emissions, climate-resilient economy. It puts in place the core building blocks that will give certainty to New Zealanders that, no matter what government is in power, there will be a long-term approach to climate change that endures political cycles.

2050 target

A new 2050 target in the Bill would provide more certainty about the direction for the transition. This could help give businesses, households and local government a strong signal of the direction we are heading in as a country, and help people make confident choices about how to achieve our 2050 goal. Many other countries have already set ambitious long-term emissions reduction goals. The UK aims to reduce emissions by 80 per cent of 1990 levels by 2050. Canada is also aiming to reduce its emissions by 80 per cent in 2050 (relative to 2005 levels). The European Union's target is 80 to 95 per cent of 1990 levels by 2050. Norway, Portugal and Sweden are seeking to achieve neutrality, or near-neutrality, by 2050 or earlier.

We want to hear your views on which net zero target is the right one for New Zealand.

- **Net zero carbon dioxide by 2050:** this target would reduce net carbon dioxide emissions in New Zealand to zero by 2050 (but not other gases like methane or nitrous oxide, which predominantly come from agriculture).
- **Net zero long-lived gases and stabilised short-lived gases by 2050:** this target would reduce emissions of long-lived gases (including carbon dioxide and nitrous oxide) in New Zealand to net zero by 2050, while stabilising emissions of short-lived gases (including methane).
- **Net zero emissions by 2050:** this target would reduce net emissions across all greenhouse gases to zero by 2050.

What the Zero Carbon Bill could do

Each target has different implications for our climate and economy. Modelling suggests that, under any target, there will be significant increases in new forest planting and emissions reductions in transport and energy, as well as changes in how we use our land.

We want to hear your views on the role the Climate Change Commission could have in setting the target. This could allow us to get independent advice before setting a target in law.

It may be worth New Zealand considering buying international emissions reductions with high environmental integrity from other countries, to meet a portion of its target. Although this may be a cheaper option in the short term, it would mean less investment in reducing domestic emissions.

Emissions budgets

The year 2050 is a long way away. To give more predictability, emissions 'budgets' are a necessary part of the Bill, because they set out how much greenhouse gas we can emit over a period of time, for example, five or six years.

Several choices are available around how we design this system, and we want to hear your views. For example, the duration of each budget, how far in advance we set them, whether they can be revised and what happens if they are not met.

Climate Change Commission

We propose the Zero Carbon Bill establishes a new Climate Change Commission. This would provide independent, expert advice and support New Zealanders to hold successive governments to account for progress.

We propose the Climate Change Commission advises the Government on emissions budgets to reach the target, and we also have a choice to make around the specific role the Commission could have with the New Zealand Emissions Trading Scheme (NZ ETS).

The Interim Climate Change Committee has already been set up to work on how we manage agricultural emissions and how we get to 100 per cent renewable electricity. The interim committee will

be leading these issues outside of this consultation process and will develop analysis and evidence on them. The new Climate Change Commission would advise the Government on these issues, once the Zero Carbon Bill passes into law.

Adapting to the impacts of climate change

Even if we can reduce greenhouse gases globally, some climate change is already locked in and we will need to adapt. The Bill could help decision-makers manage climate change risks in a systematic way. The Bill could require the Government to develop national adaptation plans that prioritise actions based on regular risk assessments. We also want to explore whether a targeted adaptation reporting power might be set up. This could see some organisations share information on their exposure to climate change risks.



Your **feedback** will help shape the Zero Carbon Bill

We **welcome** your feedback. Your views will help shape what will become the Zero Carbon Bill. Later this year the Bill is expected to be introduced into Parliament. A Select Committee process will follow, with a view to passing the Zero Carbon Act by mid-2019.

Have your say:

Read the full discussion document at ourclimateyoursay.nz

Make a submission at ourclimateyoursay.nz

Share your views at ourclimateyoursay.nz

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New Zealand Government



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ki ngā kōrerorero**



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