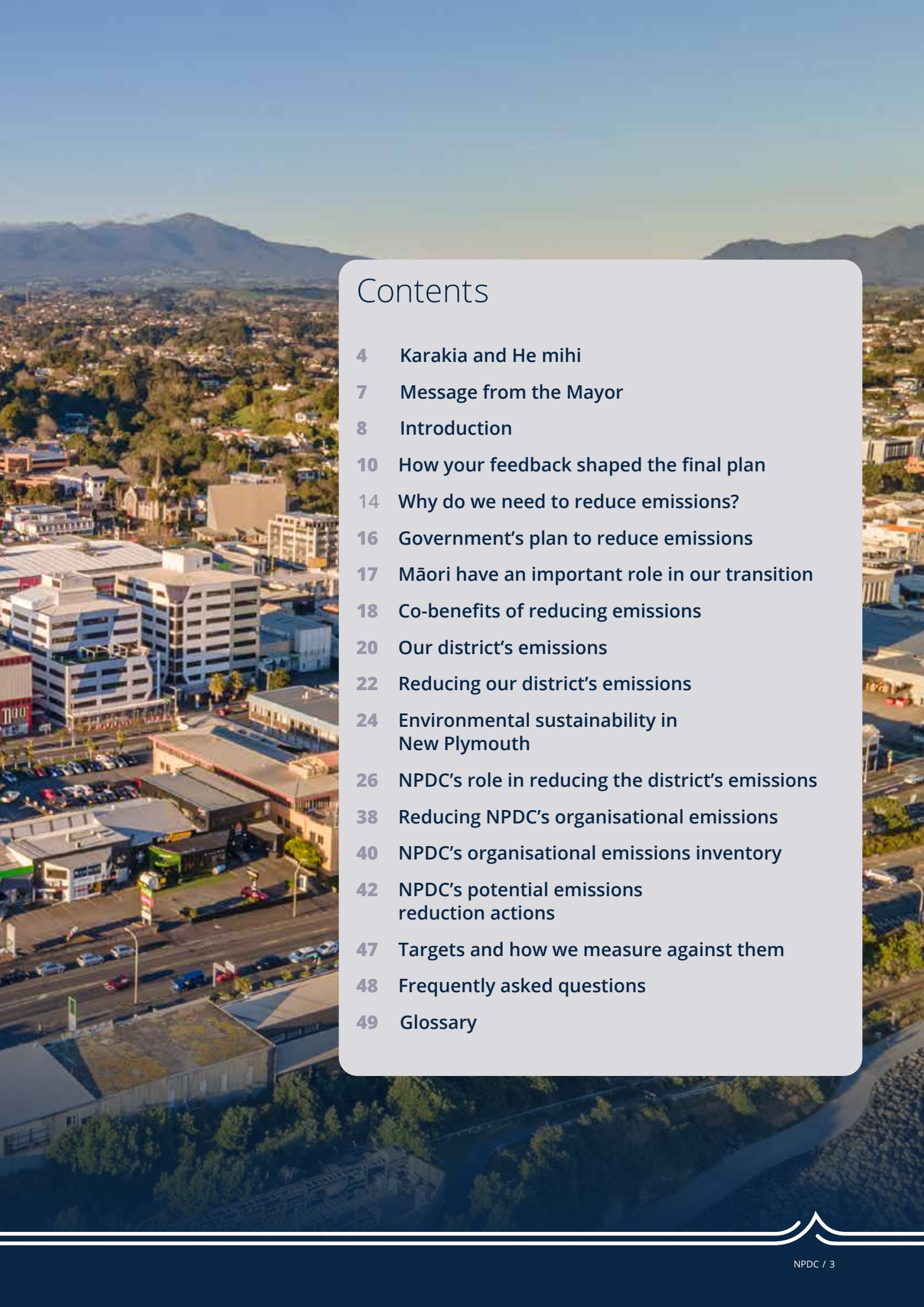
District-wide

Emissions Reduction Plan

Te Kaunihera-ā-Rohe o Ngāmotu
New Plymouth District Council



Contents

Tātai Whakapapa

Ko Rangi	**Ranginui - Sky father**
Ko Papa	**Papatūānuku – Earth mother**
Ka puta	**From them begat**
Ko Rongo	**Rongomātāne – essence of peace and cultivated foods**
Ko Tāne Mahuta	**Tāne Mahuta – essence of the forests, bush, birds, insects**
Ko Tangaroa	**Tangaroa - essence of the waters, rivers, lakes**
Ko Tūmatauenga	**Tūmatauenga - essence of war, conflict**
Ko Haumiatiketike	**Haumiatiketike - essence of uncultivated foods**
Tokona Ko Rangi ki runga	**Ranginui was pushed up**
Ko Papa ki raro	**Papatūānuku was below**
Ka puta te ira tangata	**From that sparked life**
Ki te whaiao ki te ao mārama	**Into the world of light *(from darkness)***
E Rongo whakairia ake ki runga	**Let it be heard from above**
Tūturu whakamaua kia Tina!	**Hold fast to the past, present and future**
Tina! Hui E! Tāiki E!	**Those gathered are united and all agree!**

Tātai Whakapapa is an incantation that recites the genealogy (whakapapa) of people from a Te Ao Māori perspective. Tātai whakapapa means the layers of genealogy and has been described as the Māori creation story.

He mihi

Tuia i runga i a Ranginui e tū nei

Tuia i raro i a Papa e takoto ake nei

Tuia iho te motu ngāherehere o Tane te waiora,

**Tuia iho kia Tangaroa te whatu o te moana,
e tuia rā taku kaha nei.**

**Tuia ki uta, tuia ki tai, tuia ki a rātou kua wehe
atu ki te pō uriuri, ki te pō tangotango,
ki te pō, oti atu ki te pō.**

**Nō koutou te mana, te ihi, te wehi, te tapu i uta,
i tai, i te pukepuke, i te maania.**

**I te taiao e pakangatia nei, kia tū, kia ora hei
taonga tuku iho, mā te uki whai muri....**

Kāti ake rā.

Let us be one (let us be bound) with the heavens

Let us be one (let us be bound) with our mother earth

Let us be one (let us be bound) with the enduring forests of Tane the spring of life.

Let us be one (let us be bound) with the essence of the sea. (Tangaroa)

Let us bind the umbilical that nourishes our existence and relationship with the land and the sea.

Our relationship with those that have passed onto the great nights, the dark nights, the nights that have no return.

It is from you that we gain our mana, our ihi, our wehi and our tapu from the valleys, the plains, the environment that is being fought to be upheld, as a treasure to be appreciated and nurtured for future generations.

This mihi was provided by Hemi Sundgren (Te Ātiawa) acknowledging the interconnectedness of people with the land, sea and environment.

Message from the Mayor

The journey to a low-emissions future may be long and bumpy for some, but we all have a stake in a successful transition and we all need to do our part.

Here in Taranaki, we're under no illusions - our economy, heavily reliant on extraction and distribution, is emissions-intensive and will be more affected. In 2021, our region produced 40 tonnes of greenhouse gases per person, with more than 80 per cent coming from industry, according to Stats NZ.

Treasury's Climate Economic and Fiscal Assessment 2023, a high-level summary of the implications of decarbonising our economy through to 2050 – highlights a bleak future for Taranaki unless we get significant government investment to smooth our transition.

That's not to say that NPDC won't do our bit regardless. As a Sustainable Lifestyle Capital we're committed to supporting our people and businesses to transition to a low-emissions, high-value economic future.

We're taking a Team Taranaki approach through our Tapuae Roa regional economic strategy, our Taranaki 2050 roadmap to a low emissions future, working with mana whenua, business, our residents and other organisations to position our region at the forefront of renewable energy off the back of our traditional energy industry.

At NPDC, this District-wide Emissions Reduction Plan sets out our journey to a greener future. We manage assets worth $3.5 billion and have an operating budget of about $177 million, and we've looked at every aspect of our operations across the long term. Some of these actions are already in motion. Our Zero Waste 2040 goal was drawn up in 2017 and aligns with international work around eliminating "all discharges to land, water or air that are a threat to planetary, human, animal or plant health".

Our 10-Year Plan last year was developed with a sustainability lens, with one of the big calls being $3 million to invest in Planting our Place, including plans to plant 34 hectares of urban native forest to offset carbon emissions and electrifying our vehicle fleet.

Longer term the big issue for us will be to remind central government that Kiwis have a tradition of looking after each other and after decades of being a net contributor to NZ Inc, it's time for some serious investments in Taranaki to ensure our people have a bright long term future without having to move away from this amazing place we call home.

Thank you to all those who gave us their feedback on this plan and helped to shape it. Together we can tackle one of the epic challenges of our time for our kids.

Love this place.

Introduction

This is New Plymouth's District-wide Emissions Reduction Plan. It outlines the district's contribution to greenhouse gas emissions, and how reducing them can limit the impacts of climate change. It also describes NPDC's role in emissions reduction and includes actions NPDC could take to reduce organisational emissions.

NPDC's Climate Action Framework

This plan is part of Council's Climate Action Framework adopted in December 2019, when NPDC recognised that climate change required an urgent response.

NPDC's climate response requires actions to both mitigate against and adapt to, the effects of climate change.

Reducing emissions

This plan outlines the district's emissions, and looks at ideas for how the community can reduce these to mitigate against climate change effects.

Adapting to climate change

While this plan outlines the actions for reducing emissions, we aim to consult on a district-wide Climate Adaptation Plan in late 2023.

We have a lot of work to do to meet the national target of net zero emissions by 2050, and the challenge requires the whole district to work together.

A Sustainable Lifestyle Capital

Environmental Excellence is one of the goals that underpins NPDC's vision to be a Sustainable Lifestyle Capital.

The goal includes restoring our ecosystems, mitigating further environmental impacts and tackling the challenges of climate change.

NPDC's role in helping our district reduce emissions

NPDC has a role in helping the community reduce emissions through:

Advocacy and education

NPDC can advocate for Government support when emissions reduction policies and legislation have a direct impact on our community – helping ensure a fair transition to net zero emissions.

Our teams can continue their work with the community, including educating about waste and recycling, offering advice on biking and walking to work or school, and providing information about how to reduce energy bills and create a healthy indoor environment.

Delivering low emissions options

NPDC will continue to deliver services to the community so we can all make low emissions choices. This includes zero waste services, such as recycling and food scrap collection, and water conservation measures. And while we continue to maintain walkways and cycle ways to provide a safe connected network, we're also developing an Integrated Transport Framework with low emissions options in mind.

Planning and infrastructure

Our planning needs to take a long term view of what our community will need to live, work and travel in a low emissions future. NPDC can continue to encourage a compact urban form and focus on building communities with infrastructure that enables active travel, such as walking and cycling. We can plant our green spaces to offset emissions which we cannot reduce and follow legislation to consent homes and buildings that are warmer and more energy efficient.

NPDC's organisational emissions

NPDC is a medium-sized organisation and our emissions are our responsibility. We need to address the way we design, operate and maintain our assets and think carefully before we build new ones. NPDC has developed an emissions inventory and, using our current Long-Term Plan, we have worked out potential pathways for further investigation and cost estimates to meet national targets of producing net zero emissions by 2050.

How your feedback shaped the final plan

NPDC Climate Action Framework Resolution 2019

NPDC Top 10 Korero 2020

NPDC Long-Term Plan 2021

National Emissions Reduction Plan 2022

Here's how we got here

In the plan we also included aspects of mahi done by our community in planning the move to a low emissions future, such as the *Taranaki 2050 Roadmap and Tapuae Roa*.

Results of Sustainable Taranaki's Behaviour Change survey, and community feedback from NPDC's Long-Term Plan engagement in 2021 also provided input.

The draft District-wide Emissions Reduction Plan was created with the operational knowledge and specialist skills of NPDC staff experienced in running our operations.

We asked the community what they thought of the draft Plan and have outlined on the next page the feedback we received and how it changed the finalised plan.

Climate change mitigation and adaptation

To mitigate climate change, we can reduce our emissions through activities such as using LED lightbulbs or making fewer trips by car.

To adapt to climate change, we can adjust to the changes in climate that have already happened, or are forecast to happen, such as rising sea levels or more frequent storm events.

We are here

NPDC draft district-wide Emissions Reduction Plan 2022

Have Your Say on the draft district-wide Emissions Reduction Plan

District-wide Emissions Reduction Plan adopted

District-wide Emissions Reduction Plan implementation

How it all fits together

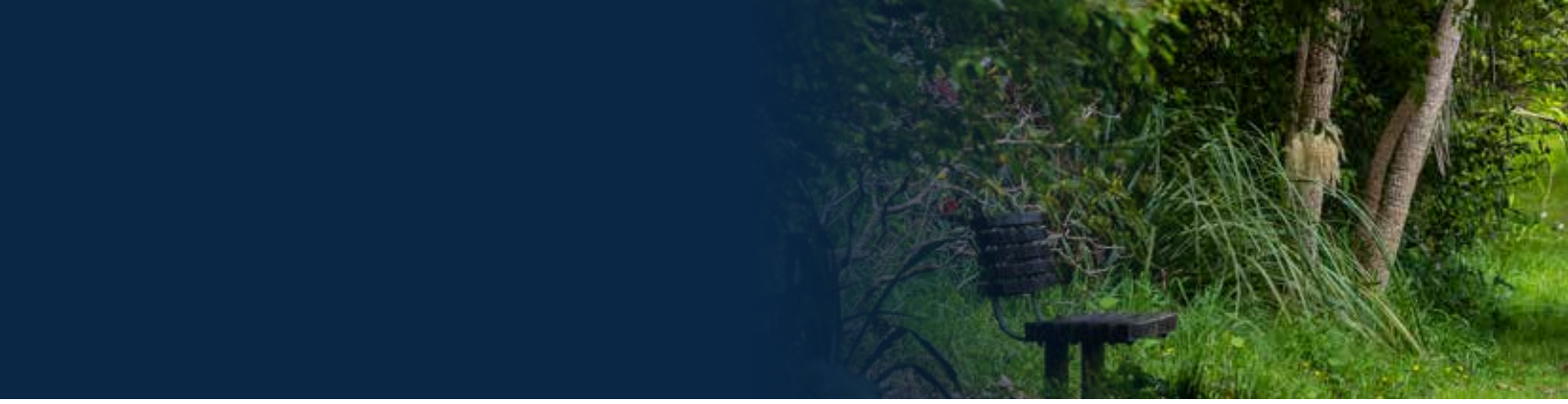
This diagram provides a snapshot of the related strategic plans, policies, guidelines and legislation that guide NPDC's decision-making and will play a key role in our transition to a net zero district. You can read about these more in the glossary on page 49.

Local Government Act, Covid Response Act, Zero Carbon Act, Energy Efficiency & Conservation Act, Building Act, Resource Management Act, National Emissions Reduction Plan, Land Transport Act, Emissions Trading Reform Bill, Building for Climate Change

NPDC	District Plan	Climate Action Framework	Draft Environmental Sustainability Policy*	Sustainable Lifestyle Capital
New Plymouth Bylaws	Resource Efficiency & Emissions Policy*	City Centre Strategy	Long-Term Plan/ Annual Plan	Water Conservation Programme
Infrastructure Strategy	Let's Go	Integrated Transport Framework	Waste Minimisation Plan	NPDC

Taranaki 2050 Roadmap, Tapuae Roa Make Way for Taranaki, Regional Waste Minimisation Strategy, Joint Mayoral Forum, Iwi Environmental Management Plans

* Policies internal to NPDC



Community engagement

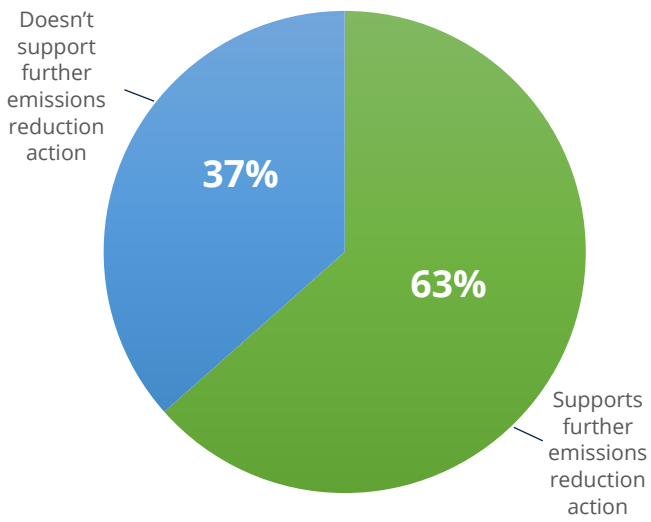
When we launched the draft district-wide Emissions Reduction Plan we asked:

- Do we have the balance right with our planned climate action, or would you like us to do more?
- How could NPDC support the community to lower their emissions?
- What do you think of the ways NPDC could reduce operational emissions?
- Anything else we should know?

We held four community zoom hui to present the draft Plan, followed by feedback and discussion. We engaged with the community through a variety of mediums and received feedback through written submissions, emails, online forms, phone calls and in person meetings.

Over 150 responses were received. Largely, feedback came from those who felt Council should do more with greater urgency to reduce emissions (63%) as opposed to those who felt we were doing enough already or should do less (37%).

Submissions to draft district-wide Emissions Reduction Plan



Despite differing views on reducing emissions or climate change, most respondents agreed NPDC should follow through on a number of actions that would result in lower emissions:

- Reducing plastic waste.
- Free/improved bus service.
- Provision of dedicated cycle ways.
- Waste processing facilities within the region.
- Kerbside collection and processing of green waste into compost.
- Replacing workplace travel with online/phone communication.
- Extended and easier to use recycling facilities.
- Solar panels on buildings and homes.
- Reducing NPDC vehicle fleet.
- Rain and greywater conservation.
- Electric vehicle transition.
- Planting projects.
- Education.

How your feedback changed the Plan

Feedback was analysed and while the contents of the Plan were largely endorsed by submitters, some changes were made. We provided more detail on Council's role in helping reduce community emissions through the work we already do in the following areas:

- Transport - we're developing an Integrated Transport Framework for the district which will outline a 30 year vision for the district's transport network, including walking and cycling.
- District planning – our Proposed District Plan supports a compact urban form that considers energy efficiency and reduces the need to rely on cars.
- Behaviour change - NPDC provides education through our Zero Waste Team, our Sustainable Homes Design Assessments and our Let's Go shared and active travel school and workplace planning.
- Waste – our plans for the future of dealing with waste in our district and our options for low emissions waste alternatives.

We also introduced a section on further community initiatives we can consider, including those that we would ask Government to help fund.

We also:

- Expanded information around Council's proposed Infrastructure Decarbonisation Programme and simplified name to Decarbonisation Programme.
- Included your additions to the list of organisations that can help the community reduce emissions.
- Made the graphs easier to read, and included a FAQ section for topics that came up often in our engagement.
- Included a 2030 target for NPDC's organisational emissions reduction, with an annualised target, and requirements to annually report on our emissions.
- Included developing an internal Sustainability Policy to guide Council staff.
- Included developing a governance framework for climate risks and opportunities.

NPDC

Why do we need to reduce emissions?

The Paris Agreement

In 2015, New Zealand, led by the National Government, signed the Paris Agreement, a global legally binding agreement to act on climate change.

By signing the agreement, we joined 196 other nations which agree that to avoid the negative consequences associated with climate change, we must limit the increase in our global temperature to 1.5°C above pre-industrial levels.

To ensure New Zealand meets its commitments to the agreement, in 2019 the Government passed the Climate Change Response (Zero Carbon) Amendment Act, which set a target of net zero emissions by 2050. The Act also set a target of reducing biogenic methane emissions by between 24% to 47% by 2050, compared with 2017 levels.

How emissions relate to global warming

Globally, temperatures have been rising for decades. This increase in temperature is referred to as global warming and is caused by trapped gases building up in our atmosphere creating an environment that is warmer than we have ever experienced before.

Over time, the build-up of these trapped gases influences the rise in global temperatures, which contribute to changing our climate and creating weather events and patterns that we aren't used to.

Although much warmer conditions sounds appealing, our natural environment relies on our climate being stable. Temperature increases have many negative consequences for all forms of life on earth.

What are emissions?

The gases that cause the temperature increase are referred to as emissions.

The most common emissions are carbon dioxide, nitrous oxide and biogenic methane. For simplicity of measurement, all emissions are grouped together as carbon dioxide equivalent, or CO2e for short.

How does this affect me?

In 2022, Taranaki Regional Council commissioned the National Institute of Water and Atmospheric Research (NIWA) to provide a report on the projected changes to the climate of Taranaki and their related impacts. The report found:

"Changes to the future climate of Taranaki are likely to be considerable. Some of the main impacts projected include an increase in hot days, a reduction in frost days, a shift to larger extreme rainfall events and increased potential for drought."

Human health

Our health will also be affected by a changing climate due to hot conditions and heatwaves. There could be new diseases carried by invasive pests and impacts to air quality. People may become displaced from their homes or may be unable to work their land or run their businesses.

Biodiversity

Ongoing sea-level rise is likely to increase exposure of infrastructure to extreme coastal flooding, as well as cause habitat loss for indigenous species at the coastal margins where ecosystems are not able to move further inland.

How will climate change affect Taranaki if we don't lower emissions?

The NIWA report looked at different scenarios for Tarankai in the future, based on if we did or didn't reduce our emissions. The projections below show the climate change impacts to our region if we don't lower our emissions.

Sea-level rise

Up to 0.8m by 2100.

Increasing rate of coastal erosion.

Increasing frequency of coastal flooding events.

Temperature

Average annual temperature +2.5-3.0°C by 2090.

Up to 63 more hot days (>25°C) per year.

Up to 23 fewer frost days per year.

Heat stress.

Other climate hazards

More intense inland flooding events.

Increasing risk of landslides and soil erosion.

Increasing risk of drought.

Wind damage to plants and assets.

Rainfall

Annual rainfall to increase for most of the region.

Winter +8-22%, Spring -6%.

Extreme rainfall events to become more severe.

Soil saturation.

Flood damage to infrastructure.

Small in the scheme of things?

New Zealand is a big emitter for its size, being the fourth highest emitter per capita in the OECD and the third highest for emissions intensity per unit of GDP.

Although large and populous countries like China, India and the US are responsible for two thirds of the world's emissions, smaller countries like ours combine to make up the final third which means we still need to pull together and do our part.

Being a good neighbour

The impacts of climate change are threatening the lives and livelihoods of our neighbours in the Pacific and developing countries further afield. These countries include low-lying islands reliant on rural or fishing economies.

As the fourth highest emitter in the OECD, New Zealand can lead efforts to support our pacific neighbours through concerted efforts to reduce emissions and reduce the impact of climate change.

Adapting to changes in New Plymouth's climate

We are preparing how to respond to the changes to our climate we are currently experiencing, and are projected to experience. We have identified where, and what in our district is at risk from climate related hazards, and we are developing a plan to adapt to them.

NPDC are in the process of developing a draft District-wide Climate Adaptation Plan and aim to consult in late 2023.

NPDC

Government's plan to reduce emissions

Government's plan to reduce emissions

Based on the advice from the Climate Change Commission, the Government published the National Emissions Reduction Plan in May 2022.

Included in the plan is an overview of the legislation, strategies and plans that 21 government agencies have written to influence reducing our emissions as a nation.

The plan included the requirement for emissions budgets and targets, as well as five guiding principles to achieve its goals:

1. Playing our part.
2. Empowering Māori.
3. Equitable transition.
4. Working with nature.
5. A productive, sustainable and inclusive economy.

There are plans targeted at key sectors, some of which are under development or yet to begin:

1. Transport sector.
2. Energy and industry sector.
3. Building and construction sector.
4. Agricultural sector.
5. Forestry sector.
6. Waste sector.
7. Fluorinated gases sector.

The Government will take the lead on bringing in plans and legislation to influence emissions reduction in all these sectors.

The Government has a number of goals to support meeting the target of net zero emissions by 2050. Some of these are:

- Reducing the distance travelled by light vehicles by 20% by 2035.
- Improving insulation standards enabling new build homes require 40% less energy to heat.
- Half of all energy we use is to be from renewable sources by 2035.
- Aotearoa is to become one of the most sustainable producers of food in the world.
- Incorporating Mātauranga Māori to support better decision-making throughout the climate response.

The Government's climate adaptation

The Government released the National Climate Hazard Risk Assessment and National Adaptation Plan in 2022.

The Resource Management Act 1991 is being replaced by three separate pieces of legislation. One of these will be the Climate Adaptation Act. The Climate Adaptation Bill is due in 2023.

This legislation is expected to support both councils and communities with considering managed retreat and other options to adapt to climate change effects.

Reducing our emissions now means there are fewer climate change impacts for future generations to deal with.

Māori have an important role in our transition

NPDC is committed to strengthening a Treaty-based partnership with tangata whenua, and welcomes news within the National Emissions Reduction Plan that Government will establish a platform for Māori climate action that will:

- **Embed partnership and representation** – to uphold Te Tiriti principles, processes and mechanisms will be resourced and designed alongside Māori to help tangata whenua to actively participate in the climate response.
- **Support Māori-led strategy and alignment** – to elevate te ao Māori within the climate response, Māori will be supported to define, measure and implement a Māori climate strategy and action plan.
- **Activate kaupapa Māori, tangata Māori solutions** – to enable community action, kaupapa Māori actions and solutions for the climate emergency will be funded by Government.

Engaging with our iwi partners

NPDC is keen to work alongside iwi and hapū as they progress their own fit-for-purpose climate response through this support and activation. Māori already demonstrate leadership that will assist a just transition to a low emissions future and climate resilient society, and NPDC can learn from that.

NPDC will continue to engage with iwi and hapū to work together on our emissions reduction goals.

NPDC

Co-benefits of reducing emissions

Many of us are motivated to do the right thing by the environment, but what else is there to be achieved?

Activities that reduce emissions come with a host of benefits for everyone and not just the environment.

Reducing our transport emissions

- ✓ Less congestion on our roads as more people use public transport and active travel.
- ✓ Safer roads as drivers, pedestrians and active modes share with care.
- ✓ Improved health and mental and physical wellbeing benefits from being outside in the fresh air.
- ✓ Better social connections in the community as people carpool, take public transport or kids walk to school together.
- ✓ More carparking spaces available for those who need them.
- ✓ Improved environmental and air quality.
- ✓ Fewer vehicle crashes.
- ✓ Less money spent on fuel and car ownership.
- ✓ Public money spent on roads that benefit more types of road users.
- ✓ Streets and city accessible to people who aren't able to drive their own car.

Reducing emissions by saving water

- ✓ Less money spent on treating our water.
- ✓ Fewer seasonal water restrictions.
- ✓ Less money spent on maintaining and increasing capacity of the water network.

Reducing waste emissions

- ✓ Less money spent on new materials.
- ✓ Less land used for landfill.
- ✓ Less odour from landfill.
- ✓ Circular economy principles that empower local people and businesses.
- ✓ Creating value from waste streams.

Reducing building emissions

- ✓ Homes and facilities that are cheaper to run.
- ✓ Building materials that are easy to reuse and recycle.
- ✓ Healthier indoor environments for us to live and work in.
- ✓ Better access to amenities and transport links from our homes, schools and workplaces.
- ✓ Resilience to network failure or energy poverty through local solar or water collection.

Offsetting emissions through native planting

- ✓ Green spaces for mental health and wellbeing.
- ✓ Using nature to provide resilience to climate change, for example wetlands.
- ✓ Habitats for indigenous species to thrive.
- ✓ Supporting vigorous biodiversity and protecting our food production.
- ✓ Natural cooling and shading for urban areas and the people who live and work in them.

Our district's emissions

Having a starting point

To successfully lower our emissions, we need to know where we're starting from – in other words, having a baseline – before we can develop a plan to tackle the emissions.

This means that in the future, when we measure our emissions against the baseline, we'll be able to see what is and isn't working.

We used the 2017/18 year as the baseline. NPDC worked with the South Taranaki and Stratford district councils to develop an emissions inventory, which lists the emissions our region and districts produce.

Following the Ministry for Environment's reporting method, emissions are counted where they are produced, not where they are consumed. Therefore, the oil and gas and dairy products that the region produces count towards the region's emissions, despite them being consumed around the country and internationally.

"Taranaki had the second-highest emissions per capita at 40 tonnes CO2 equivalent also due to emissions intensive industries like agriculture, forestry, and fishing; manufacturing; and mining, and a relatively low population. Only 2.5 percent of New Zealand's total population lived in Taranaki in 2021" - Stats NZ.

New Plymouth's emissions inventory at a glance

During the 2017/18 year, the district produced:

- Gross: 1,776,478 tonnes of CO2e (carbon dioxide, nitrous oxide and biogenic methane combined).
- Net: 1,563,630 tonnes of CO2e.
- Offset: 212,848 tonnes – the difference between gross and net emissions. This shows that our plants and trees are offsetting some of the emissions.

New Plymouth's contribution to the region's emissions

The district contributed 38% of Taranaki's gross emissions in 2017/18.

Activities producing the top three emissions volumes in the New Plymouth:

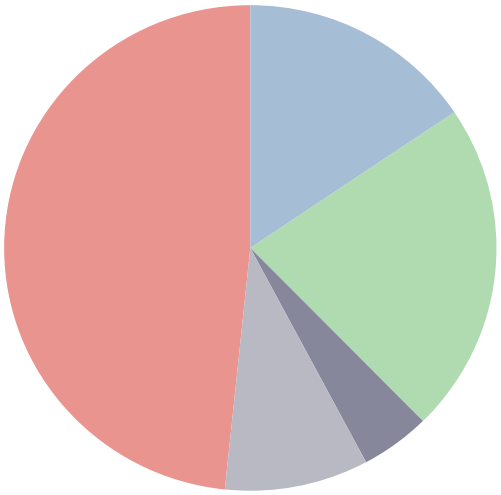
1. Agriculture 48%.
2. Transport 22% (including 14% road transport).
3. Energy production 16%.

New Plymouth emissions inventory 2017/2018

The pie graph below shows the activities that produced emissions in New Plymouth in 2017/18 and in what proportions.

New Plymouth District Emissions 2017/18

Energy	16%
Transportation	22%
Waste	4%
Industrial	10%
Agriculture	48%

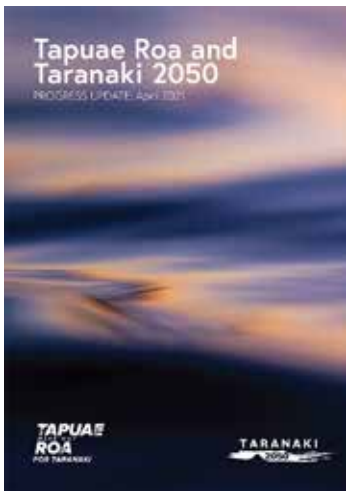


Reducing our district's emissions

A combined community-wide effort is needed to reduce New Plymouth's emissions.

We all need to work together to reduce the district's emissions. This can range from changes to the way we live as individuals through to large scale innovation by industry and requirements of new government legislation.

NPDC will do its part to advocate for the district and listen to the community when planning for infrastructure and services, but everyone will need to work together to lower emissions.



What's under way?

As a region, we've done the mahi around planning our transition to a low emissions future. There are a range of initiatives under way, some of which are listed below.

Taranaki 2050 Roadmap and Tapuae Roa

In 2020, the *Taranaki 2050 Roadmap* and Taranaki's existing economic development strategy, *Tapuae Roa: Make way for Taranaki* were combined to form a single, consolidated and prioritised work programme underpinned by a regional vision:

"Ensuring a just transition to a resilient, high-value, low emissions economy, built on inclusivity and sustainability."

Key priorities of the Taranaki 2050 Roadmap / Tapuae Roa are:

Skills, Entrepreneurship and Innovation – Interventions to address high levels of education deprivation, develop a future-focused workforce, and build an effective regional innovation and entrepreneurship ecosystem.

Industry Transformation – Progressing the low emissions and sustainable transition of key sectors, particularly in energy and food and fibre, as well as leveraging technologies and fostering niche sectors of the future.

Progressive Communities – Inclusive support for communities to ensure an increase in intergenerational wellbeing, the development of a smart economy, meaningful jobs, and lower emissions across the region.

Opportunities for sustainable behavioural change

Sustainable Taranaki has run a Behavioural Change Survey for the past couple of years, and the results provide an insight into how respondents prioritise sustainability.

Some insights from the 2022 survey showed us:

- Food sustainability and water use have become more important since 2020, with more knowledge on water use.
- The community values sustainability and intends to do more.
- Minimising waste, sustainable gardens, and clean transport are the top personal commitments.
- Reliability and longevity of the product is a top consideration when buying goods.
- Cost is the most important barrier, followed by convenience, then lack of knowledge about what is available.
- Affordability is the top motivator to change, followed by feeling good about helping the environment, then saving money in the long term.

These results show that there are opportunities to increase participation in low emissions activities if the motivators and barriers are considered by policy makers, businesses and community groups.

NPDC

Environmental sustainability in New Plymouth

These activities, led by various community groups, businesses, not-for-profits, as well as NPDC, can help reduce emissions in our district right now.

Getting around

- Link Car Sharing App
- Blip Scooters
- Bee Card
- Citylink Bus
- Connector Bus
- ChargeNet EV charger, New Plymouth
- New Plymouth Walkways
- Coseats
- Share your ride
- Transit App

Buildings and energy

- Warmer Kiwi Homes programme
- Revive Building Recyclers
- Building Traders Second-hand Building Supplies
- Planning for urban form and integrated travel
- Ara Ake community energy projects
- 2021 Building Code update
- Developing biofuels
- WISE

Advocacy

- Climate Change Commission
- EECA – Energy Efficiency and Conservation Authority
- He Waka Eke Noa – Primary Sector Climate Action Partnership
- Sustainable Taranaki
- Enviro Schools
- H2 Roadmap
- Zero Waste Taranaki
- Taranaki Forest and Bird
- E Tū job match
- Chamber Hub Employment Services
- Sustainable Business Network

Government

- National Emissions Reduction Plan
- Natural and Built Environments Plan
- Climate Change Response Act
- Building for Climate Change programme
- Climate Adaptation Act
- Local Government Act
- National Planning Standards
- Carbon Neutral Government Programme
- Clean car discount/ standard
- Waka Kotahi
- One Billion Trees Programme
- New Zealand Infrastructure Strategy
- Trees That Count
- The Impact Initiative

Community initiatives

- Electricarna
- Taranaki Farmers Market
- Sustainable Taranaki
- Wild for Taranaki
- Sustainable Backyards
- Waste Education at The Junction
- Community Gardens
- Let's Compost
- Waste-free parenting
- I Love Public Transport
- Bring it take-away packaging
- Bike Kitchen
- On the House
- Rapid Reforestation
- Ngā Motu Marine Reserve Society
- Taranaki Conservationists
- Sustainable Coastlines

Shared economy

- Again Again cup borrowing
- Carpool carparks
- Crop swaps
- Seed savers

NPDC

- Climate Action Framework
- Let's Go education and active travel infrastructure
- Let's Go bike skills for schools and early childhood education
- Proposed District Plan
- Integrated Transport Framework (in development)
- City Centre Strategy
- Planting our Place
- Zero Waste 2040
- LED streetlights
- Emulsion bitumen
- Electric rubbish trucks
- The Junction
- EV fleet renewal project
- Sustainable Homes assessment
- Wai Warrior campaign
- Water conservation project
- Universal water metering
- Community orchards
- Recycling bins in the community

What other initiatives could be added?

Tell us more

Help us keep this list up to date by getting in touch and letting us know of new and exciting initiatives.

NPDC's role in reducing the district's emissions

Advocacy and education

NPDC will continue to advocate on behalf of the community for Government support when emissions reduction policies and legislation have a direct impact on our community – helping ensure a fair transition to net zero emissions.

We will continue to work with our community on the following initiatives.

About behaviour change

As part of their work, our Let's Go teams and our Zero Waste teams deliver effective education programmes to support the community make the transition to a low emissions lifestyle. These teams offer programmes for everyone from pre-schoolers through to the broader community and workplaces, as well as advising on viable and practical solutions for commercial operations.

Zero Waste

If you are a school, business, organisation, not-for-profit, club, marae or church, our team can help you reduce your waste. NPDC's Zero Waste Team can provide you with on-site support to analyse and understand your unique waste reduction needs and work with you to create solutions to reduce waste.

Let's Go

Our Let's Go Team offers advice on bike skills, works with schools and workplaces to develop and deliver sustainable travel plans and encourages sustainable travel behaviour.

Planting our place

We want to help bring back native bird song to our urban areas and make our place greener and healthier for our kids. NPDC's Te Korowai o Tāne grant allocates $30,000 each year to help groups with native planting on their own property. It is open to community and not-for-profit groups including schools, sports clubs, kōhanga reo, kindergartens, early childhood and play centres and marae.

Sustainable homes

NPDC has a Sustainable Design Adviser, offering tailored and independent advice directly to the public. This service is free to all New Plymouth residents with the aim of enabling healthier and efficient homes for current and future residents.

Be a wai warrior

Our Water Team provides education to kids and advice to residents where our water comes from, how we treat it and on how to conserve water. We know that reducing the amount of water we consume as a district will result in fewer emissions from treating water.

NPDC is in good company

Officers from NPDC meet regularly with officers from South Taranaki and Stratford District Councils and Taranaki Regional Council to collaborate, share information and ensure there is regional consistency in our response to climate change.

NPDC has submitted with Taranaki Regional Council, South Taranaki District Council and Stratford District Council through the Joint Mayoral Forum, on a range of climate change related legislation and plans.

We are part of the Local Government Forum Council Climate Network, which encourages networking across all local governments in addressing climate issues.

We take part in the Energy Efficiency and Conservation Authority (EECA) Local Government Network.

We also work closely with Venture Taranaki, our regional economic development agency, to ensure a just transition for our region.

Planning and infrastructure

We know that planning decisions can have long term consequences for the emissions created in our cities, so planning tools like the District Plan are a great opportunity to reduce emissions in our district.

Ngāmotu New Plymouth City Centre Strategy

Our Ngāmotu New Plymouth City Centre Strategy sets the strategic direction for New Plymouth's city centre over the next 30 years.

It is underpinned by five key goals: culturally distinctive; a re-energised economy; thriving with residential living; accessible and inclusive; and green and healthy.

The strategy is a great example of how emissions reduction goals can be woven into long-term plans to enable potential resilience to climate change in the future.

Green and healthy refers to the city centre putting low emissions and environmental well-being at the heart of the design. This approach will lead to the city centre being resilient and adapting to climate change and supporting living in ways that reduce reliance on fossil fuels.

Biodiversity

NPDC carries out a range of measures, both regulatory and non-regulatory, to protect, maintain and enhance the district's biodiversity

This work is often delivered through collaboration with tangata whenua, land owners and multiple agencies, organisations and community groups.

NPDC values indigenous biodiversity and recognises the co-benefits of protecting and enhancing it for carbon sequestration, the resilience for climate change adaptation, and the interrelationship between forests and other ecosystem components, such as waterbodies and the coast.

The Proposed District Plan

NPDC is updating the District Plan to keep up with changes to the district. The new District Plan will respond to the need to reduce emissions with provisions relating to:

- compact urban form which will reduce the need for private motor vehicles and consider energy efficiency;
- transportation planning that will allow for electric vehicles and a reduced need for private vehicles;
- protection of significant natural areas (SNAs); and
- recognising emerging technologies that will offer potential for a transition to a low-emission economy.

Delivering low emissions options

NPDC will continue to deliver services to the community so we can all make low emissions choices.

This includes zero waste resources, such as recycling and food scrap collection, and water conservation measures.

While we continue to maintain walkways and cycle ways to provide a safe and connected network, we're also developing an Integrated Transport Framework with low emissions options in mind.

Integrated Transport Framework (ITF)

As our district grows we want to make sure our streets are safe, efficient and accessible for everyone.

We're developing an ITF that sets a vision to guide investment for the district's transport network over the next 30 years. The ITF will include a list of projects that work towards this vision over the next 10 years.

The ITF is essential for our district to help reduce emissions and provide a safer transport network, ensuring roads are opened to welcome all travel modes.

The ITF will developed from February 2023, with consultation in the middle to late 2023.

Zero waste in New Plymouth District

NPDC is reviewing its Waste Management and Minimisation Plan (WMMP), and is co-creating the vision and goals of this plan with the community.

NPDC has a goal of Zero Waste by 2040 and sees enabling the circular economy as a key to achieving this target.

The circular economy requires Government, the public and private sector to all work together and with the broader community.

NPDC is focusing its contribution to the circular economy through enabling waste reduction and materials recovery by providing infrastructure and behaviour change initiatives.

We are working with regional partners to develop a regional organic material recovery facility for organic waste and a commercial material recovery facility (The Sorting Depot) to sort waste from the commercial sector.

Both facilities support the circular economy, have emissions reduction impacts and have the potential to create valuable products from waste streams from other industries.

What is a circular economy?

In a circular economy, we design out waste and pollution, keep resources in use for as long as possible, then recover and regenerate products and materials at the end of their lifecycle.

Protecting and regenerating natural systems is key to a circular economy, as is delivering equitable and inclusive outcomes.

Further community emissions reduction initiatives

NPDC will continue to seek new ways to reduce the district's emissions. We have sought ideas from residents to help develop this Plan. Our initiatives need to complement and enhance those already undertaken by Government, business, community organisations and individuals.

Many of the public's ideas are already underway, which shows the district is on the right track. These three initiatives target the three largest sources of our district's emissions – agriculture, transportation and energy:

- Venture Taranaki (which NPDC owns and co-funds) supports farming through Branching Out (see page 33), Catchment Communities and other initiatives.
- NPDC's Integrated Transport Framework and Let's Go programme promote active, public and other transport initiatives (see page 29).
- NPDC's Sustainable Design Adviser advises people on how to make their homes healthier and more efficient, which reduces household energy consumption (see page 27).

NPDC cannot by itself support people to reduce emissions. We continue to call on Government to increase funding for community initiatives, and for supporting rules and regulations. While Government funding could accelerate almost all initiatives, we have recommended seven major programmes to the Government for additional funding. We also recommend two key regulatory changes that would enable us to help the community (see box). We expect the Government will also back other local initiatives with funding or regulatory changes.

Most new NPDC initiatives will focus on how community emissions arise from our infrastructure and services. We will review these opportunities regularly and consider other initiatives beyond these.

One way NPDC can help reduce community emissions is to **support the grassroots groups through a specific funding scheme.** We need to investigate how such a scheme might work to both support these groups to reduce their own emissions and to help the community reduce emissions. This could also enable us to support some of the identified initiatives without direct responsibility for their delivery.

We aim to review this Plan in line with our Long-Term Plan cycle. One of the key aims for the next cycle is to consider a wider variety of community emissions reduction initiatives. This will require greater understanding of community emissions sources, and the potential impact of initiatives.

Where we could further help reduce our community emissions

Current initiatives that Government funding needs to accelerate:

- NPDC's Integrated Transport Framework.
- NPDC's Planting our Place.
- NPDC's Zero Waste actions.
- Venture Taranaki's agricultural programmes.
- Venture Taranaki's energy transition programmes.
- Te Pūkenga WITT energy transition programmes.
- Ara Ake's new energy work.

Regulatory changes that would help us:

- Exemption to the Credit Contracts and Consumer Finance Act 2003 to re-enable the Ngā Whare Ora Taiao o Ngāmotu (New Plymouth Sustainable Homes Voluntary Targeted Rate Scheme).
- Improved Building Code requirements for energy efficient and more sustainable buildings.

Potential initiative areas that we could undertake, collaborate on or support (particularly with Government funding):

- Local micro-energy schemes.
- Behaviour change support and education, including improving access to, and uptake of, existing schemes.
- Local food production, markets and resilience.
- Further healthy, energy efficient, and sustainable homes initiatives.
- Supporting electric transport modes, including supporting EV public charging and e-bike uptake.

CASE STUDY

Taranaki 2050 and Tapuae Roa

In 2019 Taranaki 2050 Roadmap was created. People of Taranaki said their vision for Taranaki includes:

- A strong, sustainable environment.
- Education options that move and flex with a changing world.
- Attractive jobs.
- A lifestyle similar to the one we enjoy now.
- Leading the way in sustainable, low-emissions energy.
- A region that looks out for and cares for itself and its people.

In 2020 the Taranaki 2050 Roadmap joined with Tapuae Roa, the region's economic development strategy, to create a joint action plan, which Venture Taranaki coordinated and reported on.

Nga Kaiwhakatere o Taranaki – a group of regional leaders across local government, iwi, business, unions, community, education and central government – led the delivery of the actions established through Tapuae Roa and Taranaki 2050.

Venture Taranaki, as the regional development agency, supported the facilitation and coordination.

"Many of the diverse actions identified throughout have the potential to deliver direct emissions reduction, with others supporting and resulting in indirect reductions also.

Collectively these will contribute lasting and significant impacts as part of our transition to a low emissions, high value economy.

We will be carrying these actions forward into a refreshed economic development strategy in 2023," says Kelvin Wright, Venture Taranaki Chief Executive.

CASE STUDY

Adapting to climate change at Rōhutu

Rōhutu Ahu Whenua Trust is working with NPDC and a Massey University research team on a collaborative project to help the Rōhutu community adapt to the impacts of climate change.

The whenua at Rōhutu is experiencing the impacts of coastal erosion from a changing climate and several homes built within the past 60 years are at risk of storm surges or inundation.

"Our top priority is the safety of people living on the whenua in these at risk areas," says a Rōhutu Ahu Whenua Trust spokesperson, "we need to ensure everyone is safe from the impact of climate change and that we also protect our whenua and our past as we adapt to a new way forward".

The Rōhutu Ahu Whenua Trust administers the Māori land freehold on behalf of the owners, and the work with NPDC and Massey University includes creating a plan to adapt to the short, medium and long-term challenges and opportunities for its whenua and those who live on it.

The project centres on creating positive outcomes for the people and whenua at Rōhutu, and utilises a mixture of local, national and international experience in climate change adaptation planning. The inclusion of Mātauranga Māori, local knowledge and scientific understanding will help progress the adaptation pathways.

"This project is a great opportunity to facilitate two way learning," says the Trustee's spokesperson.

"The Trust, community and Council can learn from Massey, while at the same time the knowledge and insight from our people can contribute to the research team's understanding of adaptation planning in Aotearoa."

CASE STUDY

Dr Cristiano Marantes, CE Ara Ake

Ara Ake

Ara Ake, New Zealand's future energy centre, supports the development and commercialisation of energy innovation through demonstration projects, sharing sector and global insights, helping innovators and building connections.

Ara Ake supports communities across the motu to be energy resilient, with a current project allowing excess solar energy from a marae to be shared with local houses within the papakāinga.

"We are passionate about bringing all New Zealanders on the journey to a low emissions future," says Dr Cristiano Marantes, Ara Ake chief executive.

Ara Ake is also supporting communities with providing the tools and direction to implement low emissions energy solutions. Actively nurturing talent of all ages, Ara Ake supports the EVolocity programme, the WITT Science and Technology Fair, and Taranaki Startup Weekend. Through partnering with WITT, a scholarship is available to energy students, with future third year students being offered the option of two energy courses.

Ara Ake also works with businesses – both small and large – on demonstration projects of new and emerging technologies.

Projects such as, enabling WITT and Singapore-based Ecolabs Centre of Innovation for Energy to develop a testbed at WITT's campus, and supporting Auckland-based start-up Emrod to pilot its world-leading, long-range wireless power transfer technology for the first time in an outdoor field demonstration in Taranaki.

Ara Ake casts its net globally to address New Zealand's unique energy challenges.

Partnering with Hawaii-based Elemental Excelerator, allows our local talent to access international experts and mentors to share ideas.

CASE STUDY

John Snook, Former WITT CE

WITT

Leading the charge to reduce emissions and be carbon neutral by 2025, former WITT CE John Snook knows a multi-pronged, ambitious approach is needed. These ambitions are aligned with meeting the demand for a trained workforce required tomorrow and into the future.

WITT's role is to enable students to adapt and learn. "We need this workforce by 2030 and maybe sooner," says John.

"WITT needs to teach students the skills they need today and provide pathways to future skills."

These future pathways include working with Ara Ake on implementing energy saving technology at WITT for the Singapore-based Ecolabs, through to upskilling construction students in sustainable building techniques.

"These partnerships not only illustrate the Team Taranaki approach; they are essential to being able to make the giant steps forward we need to meet our emissions reductions ambitions."

To enable this, John believes, requires accessible part-time education for full-time workers: "WITT's Qualify Me programme enables full time workers to get qualified faster by taking their prior work experience into account."

WITT is working to position itself as a Centre of Vocational Excellence (CoVE) for Energy, aligning with Canterbury and Victoria universities and appointing a Professor of Transitional Energy as it seeks to bring education of new technologies into the workforce and realise the strategy Te Korowai Mātauranga o Taranaki - cloaking the entire rohe with knowledge.

CASE STUDY

Trudy and Dane Kendall, Taranaki avocado growers

Branching Out

Branching Out is a long-term strategic project for Taranaki, facilitated by Venture Taranaki, and developed from Tapuae Roa. Branching Out aligns with the Taranaki 2050 Roadmap, the region's strategic vision for a low-emissions future.

Since 2020 Branching Out has identified, investigated, and validated diversification opportunities and high-value food and fibre ventures for the region to ensure the long-term sustainability and resilience of the food and fibre sector and the communities it supports.

The next stage will see six high-value commercial ventures in hemp fibre, medicinal ingredients, indigenous ingredients, hops, gin botanicals, and high-value food crops get off the ground.

"We aim to create 50 new jobs, plant 650 hectares of novel crops, develop new enterprises, and attract $8 million of new revenue or investment to our region by 2025," says Anne Probert, Director, Sector Partnerships at Venture Taranaki.

Branching Out is one answer to environmental concerns and changing consumer demands that pose significant challenges while offering significant opportunities to the food and fibre sector in Taranaki and New Zealand.

Branching Out has secured $2.17m to deliver the project's second phase over the next three years. Funding comes from MPI's SFF Futures fund ($975,000). Also, from local funders including, Toi Foundation, LA Alexander Trust, AGMARDT, the region's councils and in-kind support from industry partners, growers, and research institutes.

Discover more at Venture Taranaki.

CASE STUDY

Sustainable Taranaki

Sustainable Taranaki's mission is to educate, inspire, and enable our community to protect, preserve and enhance our natural environment. It wants to harness the power of the community's close connections in their practical programmes and education.

The establishment of the Marfell Community garden shows what can be achieved when a community comes together.

The community has seized on food resilience with huge interest in the Sustainable Backyard Trail and the added benefits of getting families outside and connecting.

"Everyone has barriers and limitations so no one-size-fit-all when it comes to supporting the community to become more sustainable," says Sustainable Taranaki Operations Manager, Joe Turton.

Motivators are different for everyone. Growing food for your whanau, learning new skills, enjoying the outdoors and the health benefits of being active are all good reasons to participate.

Sustainable transport also generates lots of interest and is responding by piloting new ideas.

A recent car-pooling pilot with Taranaki District Health Board (TDHB), where car parking spaces on site were reserved for carpooling participants, showed how much can be achieved when employers get on board to support staff.

Sustainable Taranaki offers useful education and advice for individuals and business to make a start in sustainability. See https://sustainabletaranaki.org.nz for more.

CASE STUDY

Resource Recovery Organics

Organic material is a significant proportion of our district's waste. NPDC introduced the kerbside food scraps collection alongside behaviour change campaigns which reduced organic waste to landfill from 78% to 55%.

While this reduction is positive, diverting the remaining organic waste from landfill would be the equivalent of removing 826 cars off the road.

NPDC' will focus on organics in 2023 with solutions catering for the community, education and commercial sectors.

Education programmes, infrastructure and policy will be delivered to support effective and long-lasting reductions in organic material being sent to landfill.

"Our virtual composting hub and the Let's Compost programme with Sustainable Taranaki are examples of solutions we are keen to expand" says Oliver Leuthart, Behaviour Change Lead.

Let's Compost has been operating since 2019 and during this time 27 workshops have been held and 134 compost bins subsidised. This has diverted approximately 24 tonnes of organic waste from landfill.

Future iterations of this project may look to expand composting programmes for businesses and schools as well as residents.

Visit NPDC for chances to become involved!

CASE STUDY

Let's Go

NPDC's Let's Go Team has been encouraging, enabling and educating people to walk, ride, bus or rideshare since 2010.

Let's Go supports schools and workplaces to develop and implement sustainable travel plans.

Within schools, a well-established cycle and scooter skills programme is delivered from pre-school through to intermediate age students, with over 5,000 students receiving training in 2022.

The team runs campaigns and events throughout the year including the Ride Summertime Rolls programme and the Fresh Air Challenge, a month-long event recognising the benefits of active and shared transport choices.

Road safety messaging and events within the Fresh Air Challenge aim to improve safety and driver awareness of people travelling actively.

"Just changing your travel choice one day a week can make a real difference.

If you usually travel by car five days a week to school or work, walking, riding, catching a bus, or working from home on one day can reduce your vehicle kilometres travelled by 20%" says Nadine Ord, Let's Go Lead.

CASE STUDY

Jen Natoli, E tū Team Leader

E tū

New Zealand's biggest private-sector union, E tū, develops workplace leaders to organise their workmates to win better lives. E tū also trains delegates to provide members with workplace representation, supported by legal advice, a free phone support centre, education on work rights and other services as well as a political voice.

Now, more than ever, workers need to be enabled to engage actively in changes they face at work and what work will look like for generations to come.

Climate Change will mean changes to jobs, goods and services and E tū recognises this is an unsettling time for both businesses and employees. However, the union movement has a long history of engaging workers to design and lead change to guide organisations through transformations and is the reason there is a Just Transition.

Organisations need to plan to adapt to the effects of a changing climate and those plans start with workers.

A changing climate means collaboration about the effects of heat and disruption to production/ logistics through major weather events.

The union movement is highly experienced in dealing with change, such as automation and labour rights, and climate change presents another challenge to overcome.

Businesses and their employees need to engage early to prepare. "Justice comes when you ask employees what they want," says E tū Team Leader Jen Natoli.

Early collaboration between staff and businesses includes a roadmap that could reassess the relevance of what they produce in a low-emissions economy.

Employees can also prepare to re-skill in emerging technologies and products.

CASE STUDY

Carmen Castro and Joop Verbeek, IncaFé

IncaFé Organic Coffee

IncaFé is an award-winning organic specialty coffee producer importing coffee and organic products, such as raw cane sugar and drinking chocolate directly from growers, mostly in Peru. Run by Carmen Castro and Joop Verbeek in New Plymouth, it has won numerous awards including the TSB Business Excellence Award for Environmental Excellence in 2020.

IncaFé is a Toitu Carbon Zero company, certified organic and Fairtrade, too.

"Becoming carbon positive hasn't been difficult. IncaFé has actually been carbon zero certified since 2008, but only started promoting it just three years ago", says Joop.

The process began with looking at their emissions through their financial accounts.

Joop believes that well over 90% of emissions can be captured through gas, freight, petrol/diesel and electricity bills. "One third of IncaFé's emissions are from the containers we receive each year.

We can't get rid of all our emissions (yet) so we double offset and are now climate positive."

Joop wants to further cut the company's carbon footprint with new technology.

He says the Government could help businesses by having emissions reporting as part of their tax returns rather than having a separate certification.

"Buying carbon credits is not overly expensive and if smaller companies like IncaFé can do it then bigger companies can try as well," says Joop.

CASE STUDY

Sustainable homes

Al and Caroline Den-McKay love their "pink room," a cosy new guestroom taking shape with help from NPDC's free sustainable design advice.

The pink insulation around the walls and ceiling will soon be covered with plasterboard, but already it's made the room warmer and more comfortable.

The couple and their three children moved into the 1970s home before winter and asked NPDC Eco-Design Adviser Sam Rowlands in for a free assessment of the building.

Sam suggested some cheap and easy quick wins, such as a moisture barrier under the house and under-floor insulation, before they moved on to the bigger reno work.

"When we got the moisture barrier and insulation under the floor, it made a difference within a week – the moisture in the air came right down, and because the house was dryer, it was easier to heat and it was noticeably warmer," said Mr Den-McKay.

"We were remodelling so we thought we might as well get some advice first and this was free, so we decided to do some future proofing as well. Every time we put something new in, we go back to Sam's report and ask how do we factor that in.

"His suggestions were made specifically for this home so it's helped us look at how we can improve specific areas," he said

The family are renovating their home in phases, taking the opportunity to insulate throughout, replace the 1970s hot water system with a new energy-efficient heat-pump water system and improve ventilation in the bathrooms among other upgrades.

CASE STUDY

Planting our Place

One of the big calls in our Long-Term Plan was Planting our Place. By working to plant 34 hectares of urban forest across the District over the next 20 years, NPDC aims to help bring back native birdsong to our urban areas and make our place greener and healthier for our kids.

With a vision of improving biodiversity, carbon sequestration and allowing community participation in NPDC's climate response, Planting our Place will help us reduce NPDC organisational emissions by offsetting emissions that are difficult to get rid of.

"NPDC has made a commitment to offsetting carbon emissions and providing for biodiversity with Planting our Place", says NPDC's Parks & Open Spaces Manager, Conrad Pattison.

Working in partnership with the community and local hapū, the programme has already piloted a community garden in Marfell with Sustainable Taranaki, and partnered with local hapū to provide reserve land for planting a mahinga kai project with support from Trees that Count for 26,000 trees.

Planting our Place also includes Te Korowai o Tānē, our community grant for $30,000 per year for community and not-for-profit groups including schools, sports clubs, kōhanga reo, kindergartens, early childhood and play centres and marae access of up to $5,000 funding to plant on their own land.

The fund is open for applications now through: www.npdc.govt.nz/community/community-partnerships/funding-and-grants/te-korowai-o-tane-planting-our-place/

CASE STUDY


Photo: Sam Hartnett

Energy Efficiency at NPDC

NPDC's Energy Management Team has been running since 2006. The team uses energy management software, meters and sensors to monitor the electricity and gas consumption of NPDC's assets.

Building Management System software is used to control and fine tune heating, ventilation and air conditioning. Energy efficiency projects are delivered with a consultant for technical advice.

NPDC's facilities and assets use a significant amount of energy. Latest analysis shows that operational energy emissions have been steadily declining since 2008 with a ~46% reduction from 2008 to 2022.

The cumulative cost savings of NPDC's energy efficiency projects is in the realm of $13 million.

"The Energy Management Team is working collaboratively to integrate energy and resource efficiency within our asset management plans" says Catherine Croot, NPDC Property Manager.

Reducing emissions in our buildings and assets reduces operational costs and lowers our environmental impact, it improves occupant health and well-being.

The team has a target to reduce organisational energy emissions by 50% from 2018 levels by 2030.

CASE STUDY

Ōākura Water Treatment Plant solar installation

Ōākura Water Treatment Plant is the first of NPDC's assets to receive a photovoltaic (PV) solar array consisting of 28 PV panels.

On site solar energy generation provides carbon emissions reduction, reduces electricity costs, and provides increased energy resilience.

The 10kW system has an estimated annual generated output of 13,110 kWh, which will provide approximately 10% of the plant's energy, saving NPDC around $3,000 per year. The 28 solar panels have a life of at least 25 years and over this time will make an energy saving of around 327 MWh, saving of approximately $60,000 and reducing approximately 33,000 kg CO2e emissions.

"Commercial scale solar systems have become increasingly cost effective to install, with a drop in price of around 80% over the past ten years." says Dustin Courage, NPDC's Energy and Emissions Adviser.

NPDC is currently assessing other facilities for suitability for installing solar PV.

We will consult with the community on any future projects through our Long-Term Plan.

NPDC

Reducing NPDC's organisational emissions

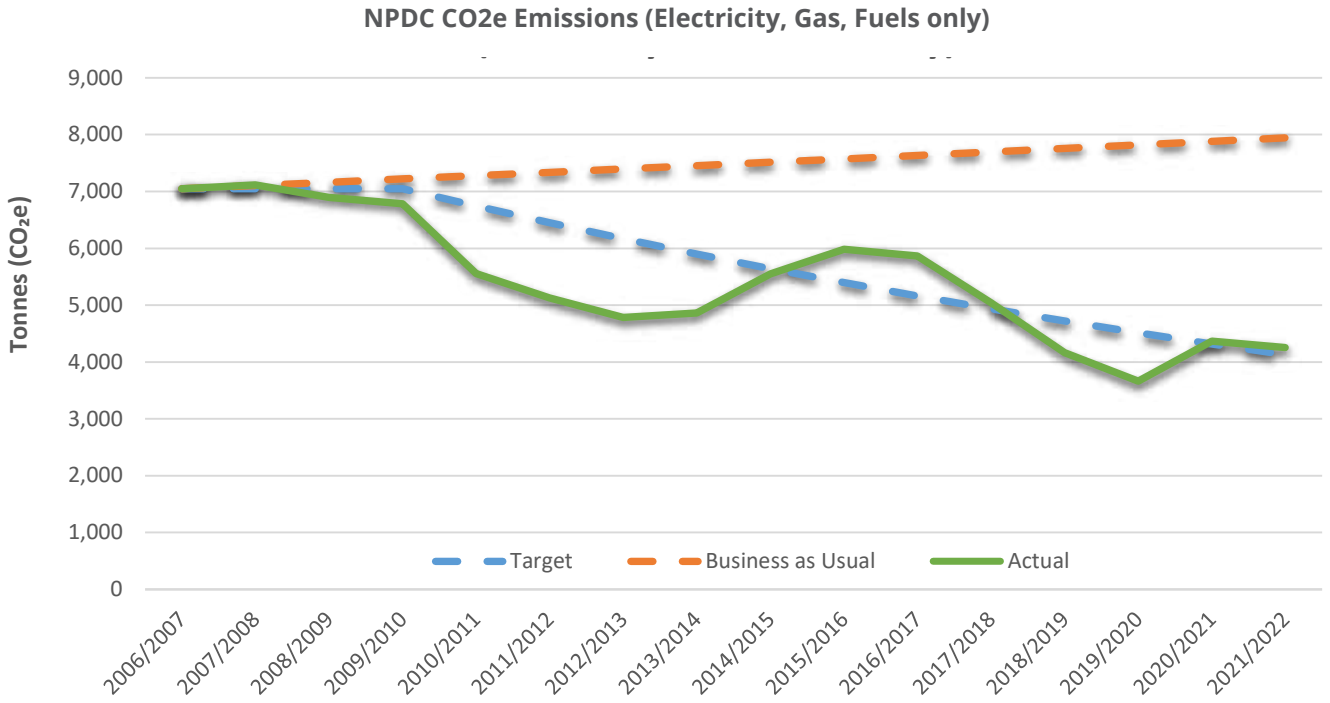
Our Climate Action Framework ensures climate change is considered in all NPDC's key plans, operational processes and reports.

Like other organisations, NPDC creates emissions from its everyday operations. We want to reduce our emissions and are actively working on ways to do this.

In addition, we've had an emissions inventory developed that specifically evaluates the emissions NPDC creates and can control. The results of this work and our options to further tackle the organisation's emissions are explained in the next section.

Energy use at NPDC

The diagram below shows that despite 30% population growth and the addition of facilities such as the Len Lye Centre and water infrastructure across the district, the operations teams has managed to drive down energy use and emissions.



Some of the initiatives that have helped us to reduce energy use and emissions.

Mechanical dewatering of the Wastewater Treatment Plant

We've reduced gas use by 25% compared with 2006 levels, even though the plant processed 50% more water. Conversion to bioreactors in 2012 achieved a further 18% reduction in energy use.

LED street lights

We've replaced more than 9,000 street lights with energy efficient LEDs since 2015. The project will save $6.5m over 20 years as well as reduce electricity use.

Civic Centre energy management

Building Management System automation and tuning with LED lights enabled the Civic Centre to reduce electricity use by 49% and gas by 66%.

Landfill and food waste electric trucks

NPDC has six electric recycling and food waste trucks. Over the vehicle lifecycle, this fleet achieves reduced emissions of 60% compared with internal combustion engine vehicles.

Minimising road maintenance emissions

Switching to emulsion in road resealing

NPDC successfully saved 367 tonnes in 2019/20 through switching from cutback bitumen to emulsion.

NPDC

NPDC's organisational emissions inventory

We've developed an emissions inventory for NPDC using the 2017/18 year – the same year as the New Plymouth District inventory. This baseline year enables both council and community to work together on reducing emissions.

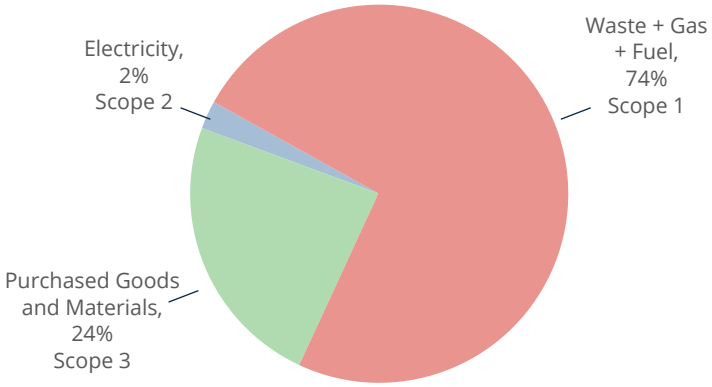
NPDC's emissions across its assets and activities are largely made up of waste, gas and fuel.

There have been some changes in the way NPDC operates since 2017/18, mainly the Colson Road Landfill, which has closed. This means waste is now trucked to a landfill outside of the district. As the owner of the Colson Road Landfill, NPDC is responsible for the emissions that continue to be released.

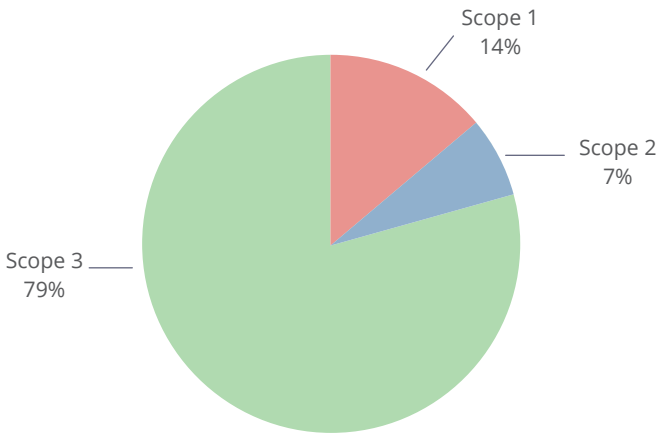
Like any inventory, our emissions inventory is a snapshot in time. We have since accounted for operational changes and our actions will reflect this. When the inventory is updated, any future changes will similarly be taken into account.

When we exclude landfills from NPDC's emissions, the categories reflect more typically of most organisations. That is, our Scope 3 emissions (emissions from purchased goods and services) are the largest proportion.

NPDC Emissions Inventory 2017/18



Emissions by scope excluding open and closed landfill emissions



Emissions

There are three categories of emissions.

Scope 1 – Covers emissions an organisation makes directly, e.g. running boilers and vehicles. For NPDC, our landfills generate the most Scope 1 emissions.

Scope 2 – Emissions organisations are responsible for indirectly, from the use of grid supplied energy.

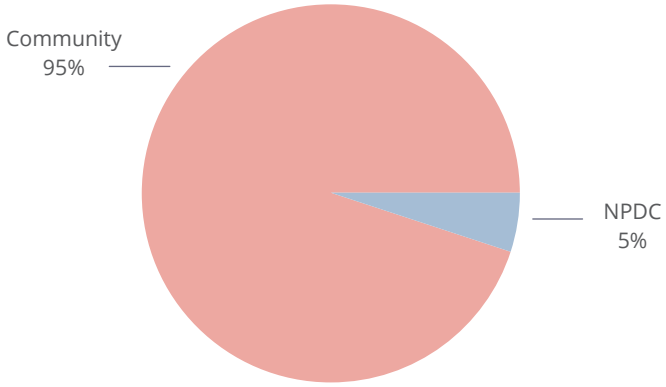
Scope 3 – Emissions from the supplies an organisation buys, and then when their customers consume their goods and services.

NPDC's contribution to the district's emissions

Comparing NPDC's emissions with the district's emissions

Although NPDC represents only 5% of the district's total emissions, we have an important role in helping the community reduce overall emissions. This includes advocating for the district, providing infrastructure that helps the community make low emissions choices, and helping people make behavioural changes to reduce emissions. However, we still need to address our own emissions.

NPDC proportion of district emissions 2017/18



Committed actions

Here are some of the projects we have committed to in our current Long-Term Plan that will have a positive effect on reducing NPDC's emissions.

- Commercial waste sorting facility, to divert wood waste from landfill.
- New organic waste processing facility.
- Road maintenance conversion to emulsified bitumen.
- New Plymouth Wastewater Treatment Plant aero strip diffuser replacement.
- New Plymouth water conservation programme.
- Switching fuel from gas boilers at Len Lye Centre, Puke Ariki, Civic Centre as well as Inglewood and Waitara Pools.

NPDC

NPDC's potential emissions reduction actions

It will be a challenge to reach net zero emissions

We needed to know how far our planned actions would take us and what else we need to bridge the gap to lower organisational emissions. To understand this, and to be clear on what costs and barriers we had to deal with, we needed data that was evidence-based.

NPDC worked with decarbonisation specialists to analyse our operations. They formed a team with our knowledgeable and skilled staff and operations managers and found out how far our planned actions would take us to our target.

What does this mean for NPDC reaching net zero emissions by 2050?

This graph clearly shows we will not meet requirements for net zero emissions by 2050 through our committed actions only.

It also shows that if we're to reduce our emissions further, the best place to start is in our infrastructure and assets, and in waste and closed landfill.

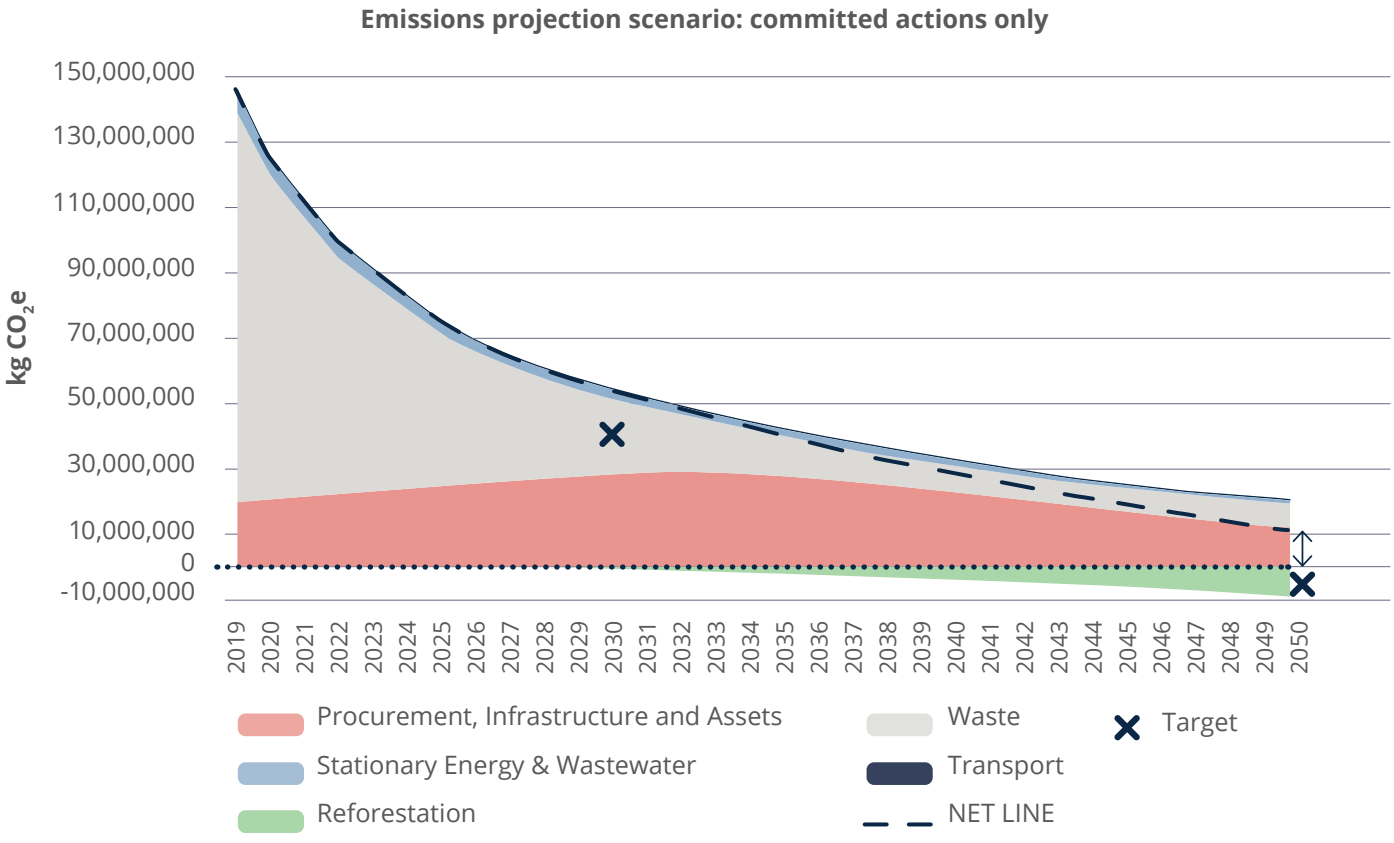
Reading these graphs

The wide grey band is emissions from our waste processing and landfills.

The X represents New Zealand's 2030 and 2050 emissions targets.

The dotted black line is the net line, which takes into account the offset from planting trees.

NPDC committed actions



Two key actions NPDC can take to make a difference

There are two major opportunities to reduce NPDC's most significant emissions in waste and infrastructure:

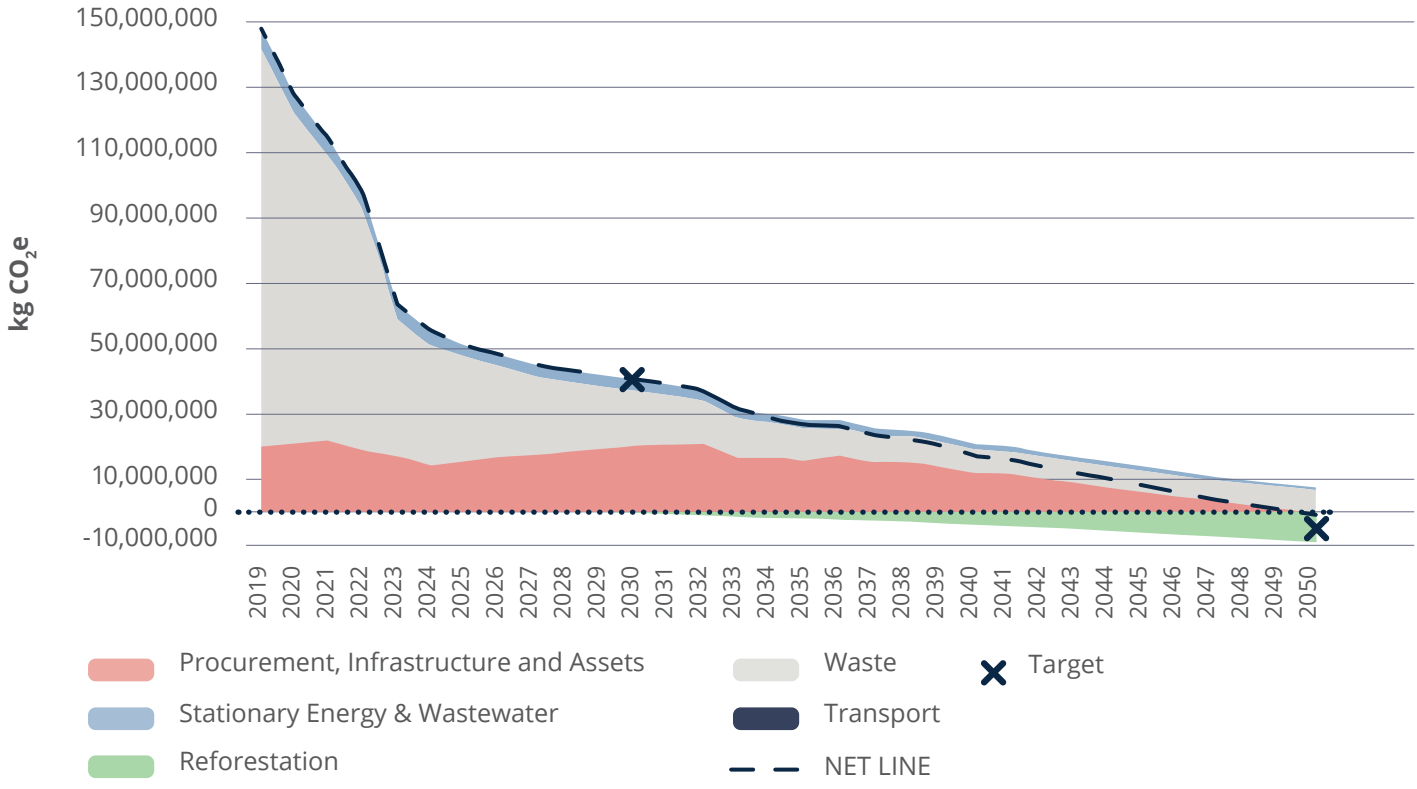
1. Complete the implementation of the Landfill Gas Capture system at the Colson Road Landfill. The estimated cost is $600,000, with an estimated emissions reduction of 26% to 40%.
2. Implement a decarbonisation programme to procure, design, build and manage future NPDC assets according to low carbon principles. The estimated cost is $200,000, with an estimated emissions reduction of 42%.

As the graph shows, the reduction in emissions from these two major actions get NPDC closer to net zero emissions, but not quite there.

Additional actions are needed

We know there are still lots of ideas we can consider to help reduce NPDC's emissions further. We will continue to work on this as we implement this plan.

Emissions projection scenario: committed actions and landfill gas capture improvements and decarbonisation programme



The Decarbonisation Programme

NPDC's use of resources and materials for operations and infrastructure projects are the organisation's largest source of emissions when you exclude closed landfills.

NPDC can reduce these emissions by integrating low carbon principles within its planning, design, procurement and supply chain.

The Decarbonisation Process embeds principles like resource efficiency, circular design, and lifecycle assessment within its infrastructure projects. These principles align with NPDC's goals around waste minimisation, economic and environmental sustainability and supply chain leadership.

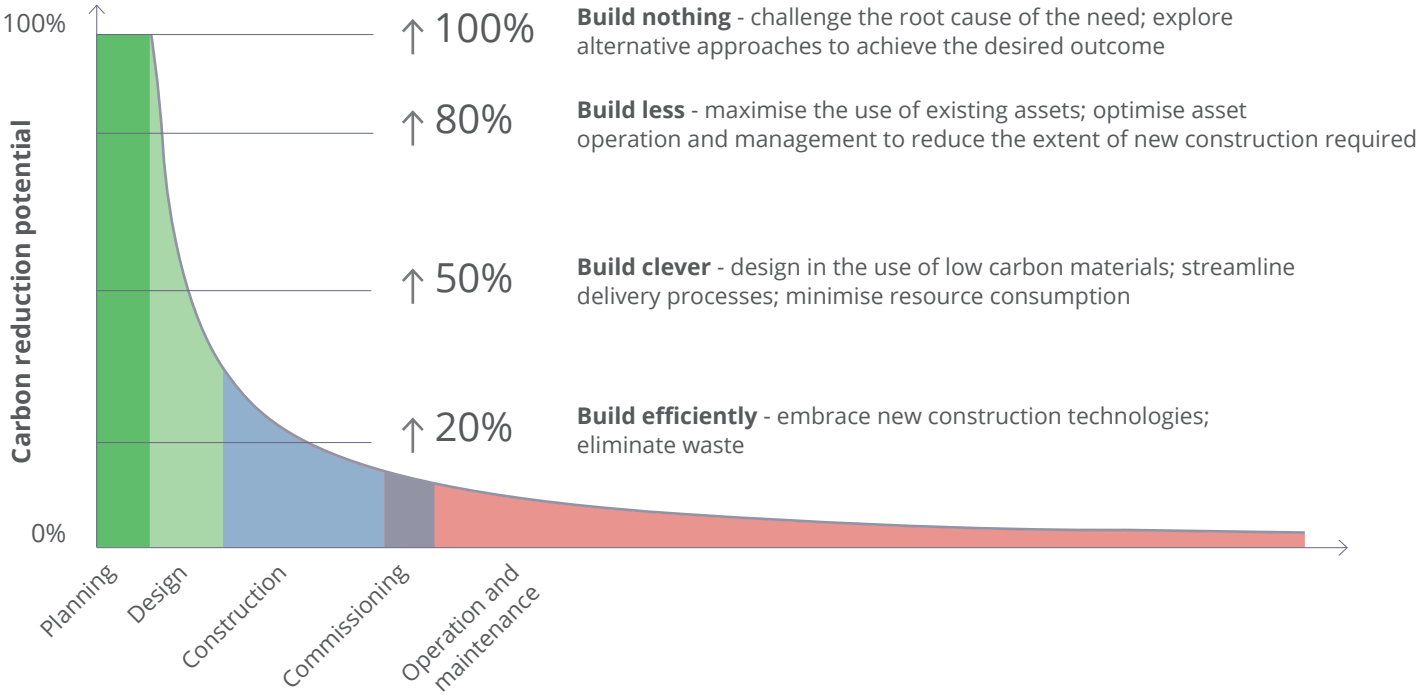
For the programme to reduce the most emissions, decarbonisation requires the reduction of the whole-of-life carbon within the things we buy and infrastructure we build.

This means working with our supply chain and developing innovative ways of operating our activities and delivering our infrastructure.

The programme offers co-benefits as well as reducing emissions, including cost savings, innovation, environmentally sustainable and equitable solutions, an increase in supply chain engagement, skills and capability.

Similar frameworks have been adopted by organisations both nationally and internationally, and based on data from these companies, embedding of a Decarbonisation Process will save 20% to 30% of NPDC's emissions year on year and offers potential cost savings of close to $1billion by 2050.

Carbon Reduction Curve



Effectiveness of carbon management throughout the project lifecycle.

Source: Infrastructure Carbon Review, HM Treasury, citing Green Construction Board

Committed and potential actions

Here is the full list of committed and potential actions that could reduce NPDC's organisational emissions. Some of these opportunities need further investigation to understand the potential emissions reductions, as well as the cost to implement. Actions we are committed to through our current Long-Term Plan are noted in blue.

Category	Action
Waste	Commercial material recovery facility
	Green waste collected and diverted from landfill
	Collect commercial food waste
	Encouraging participation in home food waste collection from 35% to 50%
	New organic material recovery facility
	Colson Road Landfill Gas Capture efficiency improvements
Infrastructure and assets	Waste collection fleet conversion to 100% battery electric vehicles
	Road maintenance conversion to emulsified bitumen
	NPDC road maintenance bitumen to include recycle plastic additives
	Decarbonisation Programme (20-30% emissions reduction)
Stationary energy and wastewater	Todd Energy Aquatic Centre: heating fuel switch and solar PV system
	Inglewood Pool: heating fuel switch
	Waitara Pool: heating fuel switch
	NPDC Civic Centre and Len Lye Centre: heating fuel switch
	Puke Ariki and Library: chiller, air handler unit and boilers renewals
	New Plymouth Wastewater Treatment Plant: aerostrip diffuser replacement
	New Plymouth Wastewater Treatment Plant: thermal dryer upgrade
	New Plymouth water conservation programme
Transport	NPDC EV fleet renewals
	NPDC non-pool fleet conversion to plug-in hybrid electric vehicles
Community wide	Integrated Transport Framework (in development - excluded from NPDC projections)
	Planting Our Place - planting 34 hectares of NPDC land with native forest

We will have an internal Sustainability Policy by the end of 2023 to support these actions and decarbonisation. This will include direction and performance indicators to reduce emissions across the Council and to meet other sustainability targets.

Save money and emissions

We needed to understand what emissions could be reduced and how much these solutions would cost to implement.

Using high level cost estimates for these actions and the emissions forecast to be saved, we can establish value for money comparisons between solutions.

The following diagram shows that there are actions that both save money and reduce emissions, such as the Decarbonisation Programme and water conservation.

There are also actions that are low in cost but achieve significant emissions savings, such as the Landfill Gas Capture system.

Then there are actions that are more expensive to implement and have fewer emissions savings but may deliver other significant benefits.

This information will contribute to helping us decide which actions to prioritise. In the future, we can update the analysis with emerging factors such as carbon pricing, inflation or shipping costs.

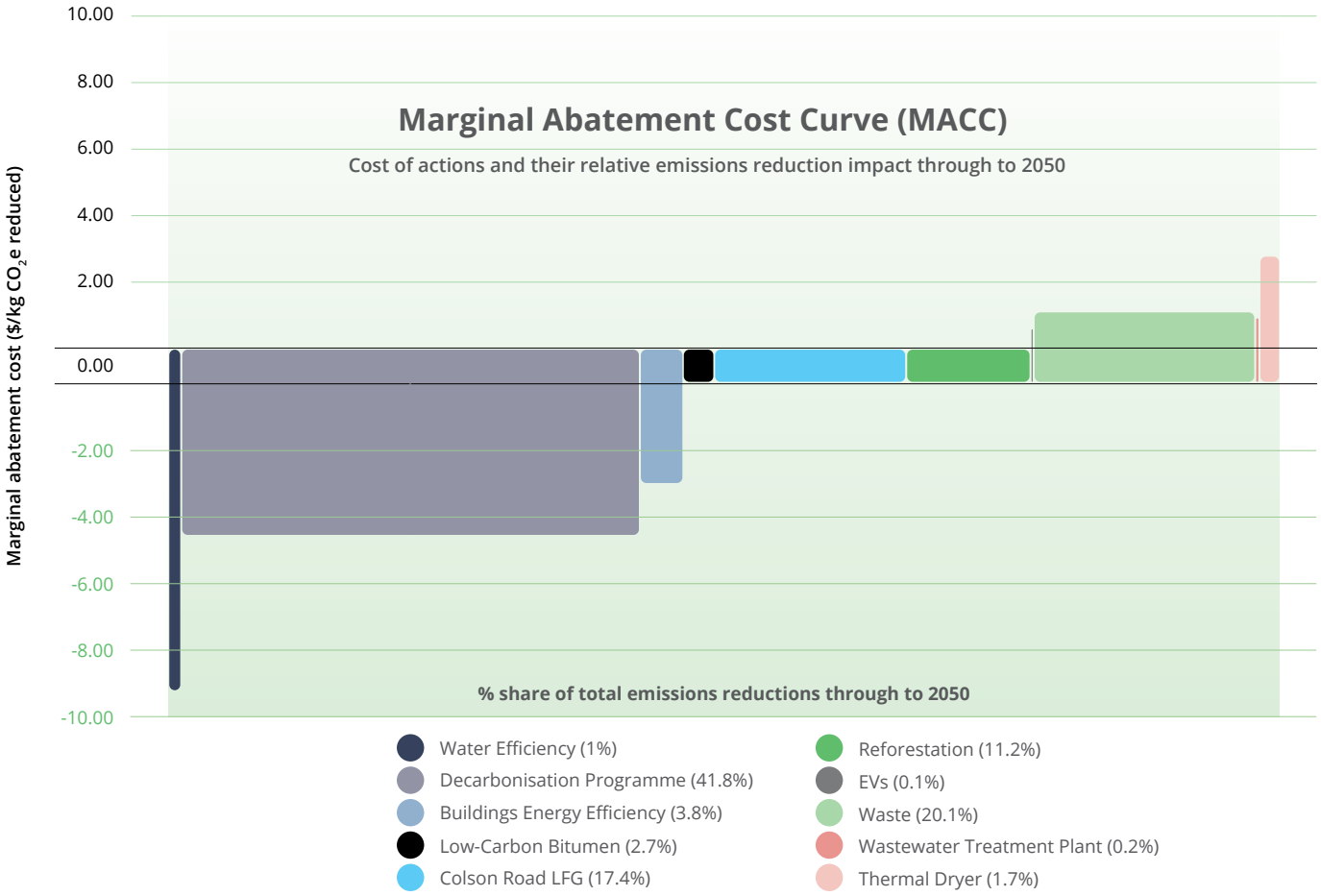
Reading this graph

The width of the columns indicates the volume of emissions reduced by the action. The wider the column the greater the emissions reduction potential through to 2050.

Actions below the line will save NPDC money, once implemented. The length of the column indicates the potential cost saving.

Actions that show little - no column and sit on the 0.00 line are cost neutral once implemented.

Actions that sit above the line will cost money.



Targets and how we measure against them

Our emissions reduction target

We've aligned both our district and NPDC organisational emissions reduction targets to what has been set for Aotearoa New Zealand through the Climate Change Response (Zero Carbon) Amendment Act 2019, which requires:

1. All greenhouse gases, other than biogenic methane, to reach **net zero by 2050**.
2. 24% to 47% reduction by 2050 (compared with 2017 levels).

Our interim target for 2030, which aligns to the national target, is a 49% reduction in emissions (other than biogenic methane) and a minimum 10% reduction in biogenic methane emissions from 2017/18 levels. This will require:

1. Our scope 1 and 2 emissions will need to reduce by 50.4%, or around 4.2% per annum (starting in 2017/18).
2. Our scope 3 emissions, measured by emissions intensity (CO2e per dollar of spend) will need to reduce by 20%, or around 2.5% per annum (starting in 2022/23).

NPDC will aim for a constant trend in annual emissions reductions, although progress will fluctuate because of various factors.

The Government recently released the first three emissions reduction budgets and the country's first National Emissions Reduction Plan. This plan, and its budgets, will help Aotearoa New Zealand reduce emissions to meet these targets.

Alignment with national targets, along with the transitional planning work that is progressing across the region, ensures we're well-placed to leverage government support as we continue to reduce emissions locally.

Measuring progress and staying on track

The Government has set an emissions reduction target for New Zealand to reach, and we have the data from the emissions inventory to set a baseline to start from. But how will we know if our actions are working?

Measurement will help us to:

1. Understand if actions are effective and are resulting in emissions reductions.
2. Identify other benefits for our community.
3. Identify any gaps in our plans.
4. Identify actions that are underperforming.
5. Ensure actions are promoting a fair transition.
6. Find new ways of working.

A vital step will the development of a nationally consistent measurement framework, which will be flexible enough to take into account emerging opportunities and technology that helps reduce emissions. Until then, NPDC will commit to the following:

Measurement from NPDC

We will:

- Develop a measurement framework for NPDC's organisational emissions.
- Measure our organisational emissions annually, obtain third party verification and report to Council.
- Update our district-wide Emissions Reduction Plan in line with our Long-Term Plan cycle from 2027.
- Consider an appropriate governance framework to assess and report on climate risks and opportunities. We will be guided by the Task Force on Climate-related Financial Disclosures Framework in doing this.

NPDC

Frequently asked questions

Why did NPDC choose the net zero by 2050 target?

NPDC has aligned to nationally set targets and the National Emissions Reduction Plan. The National Emissions Reduction Plan has indicated that local government will have a role in many of the actions committed within it. Local Government will have a lot to do in the next few years, and it is important that we know we can deliver on what we commit to. NPDC will continually reflect on its performance against these targets and respond accordingly.

Why aren't there any actions addressing agricultural or energy emissions?

NPDC does not have the levers to address these emissions sources. These are national sectors and are therefore being worked through at a Central Government level through the He Waka Eke Noa partnership (Agriculture) and the National Energy Strategy (Energy).

How will these actions be paid for? Will they affect my rates?

There is no rates impact through this Plan. Any actions noted within this Plan have either already been costed and prioritised through the current Long-Term Plan or if proposed, will be subject to the same consultation processes and costings that other Council projects will be through future Long-Term Plans.

How is the Perpetual Investment Fund (PIF) related to NPDC's emissions profile?

The PIF is set up so NPDC cannot specify how these funds are invested. This arrangement is to protect the independence of the fund. The fund is overseen by the PIF Guardians, who are appointed by NPDC.

The Statement of Investment Policy and Objectives (the SIPO) is set by the PIF Guardians, not NPDC. The PIF Guardians oversee the PIF's fund manager, who invests the PIF funds according to the SIPO.

The SIPO outlines the PIF Guardians commitments towards Environmental, Social, Governance and Cultural factors. The current SIPO outlines that the Guardians support the Principles of Responsible Investment developed by the United Nations. The SIPO is reviewed on a three-yearly basis.

As a Council Controlled Organisation the PIF has a role in meeting the obligations around sustainability and climate change as requested in its Statement of Expectation.

If any investments in the PIF have related emissions by 2050, these will need to be offset by NPDC to meet our net zero target.

How is NPDC involved in public transport?

NPDC owns and operates public transport infrastructure like roads and bus shelters and Taranaki Regional Council (TRC) operates the bus service. NPDC and TRC work together to deliver effective public transport for the community. NPDC will share feedback we received on the bus service with TRC through the consultation process.

What about Three Waters?

If the Three Waters operations are separated from Council in 2024, a significant proportion of both the carbon generation and the carbon saving opportunities are no longer Council's responsibilities. However, this will likely mean Council can focus on the other operations areas to reduce their emissions, particularly in Procurement, Waste and Transportation, which have a significant impact on our community and organisational emissions.

Glossary

Term	Definition
Aotearoa New Zealand's 2050 target	Net zero emissions of all greenhouse gases (except biogenic methane) and biogenic methane emissions reductions of 24–47 per cent below 2017 levels.
Active travel	Walking, cycling and other non-motorised forms of travel.
Adaptation	Efforts to respond to a changing climate.
Baseline	Data or information that serves as a basis for comparison.
Bioenergy	Fuel produced from plant or animal waste.
Biogenic methane	Biogenic methane is made in different ways by natural processes involving plants and animals. As a greenhouse gas, methane is 25 times more potent than CO2 and dominates emissions from waste and agriculture. Human activities create additional methane emissions that otherwise would not have occurred naturally (such as through decomposition of organic waste in landfills).
Bylaws	Bylaws are an enforceable regulation made by local governments warranted under relevant legislation.
Carbon dioxide equivalent (CO2e)	Used to describe and compare different types of greenhouse gases, by comparing their warming potential to that of CO2.
Carbon sequestration/ sinks	Any reservoir, natural or otherwise, that absorbs more carbon than it releases, thereby lowering the concentration of CO2 in the atmosphere. Examples include vegetation, forests, peatland and the ocean.
City Centre Strategy	The Ngāmotu New Plymouth City Centre Strategy (the City Centre Strategy) sets the strategic direction for New Plymouth's city centre over the next 30 years.
Climate Action Framework	Resolved in 2019, the Climate Action Framework is a long-term plan funded project to address NPDC's climate response. NPDC's district-wide Emissions Reduction Plan, district-wide Adaptation plan and transition to a low emissions fleet comes under the framework. The framework also has an internal workstream to address sustainability within NPDC's operations.
Climate Change Commission	An independent crown entity that provides evidence-based advice to the Government, to help Aotearoa move to a climate-resilient, low emissions future.
Climate Change Response (Zero Carbon) Amendment Act 2019	This Act sets a framework for emissions targets: reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; and reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030.
Decarbonisation	The term used for removal or reduction of carbon dioxide output into the atmosphere.
Decarbonisation Programme	The Decarbonisation Programme will support staff to think about the carbon impact at every stage of NPDC's operations. This includes its planning, design, procurement and supply chain.
Emissions	Greenhouse gases, especially CO2, released into the atmosphere, where they trap heat or radiation.

Term	Definition
Emissions inventory	A database that lists, by source, the amount of greenhouse gases discharged into the atmosphere during a given time period.
EV	Electric vehicle.
Fossil gas	Commonly known as natural gas. The term 'fossil gas' is used to distinguish methane from the lithosphere (under the ocean floor or on land) from methane from the biosphere (animal and biological waste). See biogenic methane.
Global emissions scenarios	Plausible future development pathways of human greenhouse gas emissions.
Greenhouse gases	Gases in the atmosphere that trap the sun's heat by preventing it from leaving the atmosphere. Common greenhouse gases include water vapour, CO2, methane and nitrous oxide.
Gross emissions	Total greenhouse gas emissions from all sources.
Infrastructure Strategy	All councils are required to prepare an Infrastructure Strategy as part of their three yearly long-term planning process. The Infrastructure Strategy covers 30 years and identifies the key infrastructure issues facing the Council.
Integrated Transport Framework	An Integrated Transport Framework is one of the key ways that cities can work towards a sustainable future. It refers to a multi-modal transport system where different modes of transport are efficiently linked with each other.
Internal policies	These are policies NPDC makes for itself and its staff to ensure that we deliver effectively for our community.
Landfill gas	Landfill gas, a by-product of decomposing organic waste in landfills, mainly composed of biogenic methane and CO2.
Landfill gas capture	The process used at modern landfills to capture landfill gas, which is then used for energy or flared.
Let's Go	Let's Go is a campaign run by NPDC to get people to choose active and sustainable transport options. The team identify opportunities for new infrastructure that will encourage people out of their cars.
Long-Term Plan	NPDC's 10 year plan which sets the direction for Council investment and is formally reviewed and updated every three years. The plan includes details of the activities Council will undertake, how they will be managed, delivered, and funded.
Mahi	Work or an activity.
Marginal abatement cost curve	A figure presenting the costs or savings expected from different opportunities, alongside the potential volume of emissions that could be reduced if implemented.
Mitigation	Efforts to reduce or prevent emissions.
National Emissions Reduction Plan	Released by the Government in May 2022, the plan outlines the policies, strategies and plans Government will use to reduce and remove emissions, in order to meet each emissions budget, and the target of net zero emissions by 2050.
Net emissions	Total emissions minus activities or assets that remove greenhouse gases from the atmosphere such as tree planting.
Net zero	In Aotearoa New Zealand this means completely negating the amount of greenhouse gases, produced by human activity (except biogenic methane) by 2050. This can be done by balancing emissions and removals of greenhouse gases, or by eliminating emissions from society.

Term	Definition
New Zealand's Emissions Trading Scheme (NZ ETS)	A key tool for meeting our domestic and international climate change targets. It places a price on greenhouse gas emissions and requires all sectors of our economy, except agriculture, to pay for their emissions.
Paris Agreement	A legally binding international treaty on climate change mitigation, adaptation and finance, adopted by 196 parties in Paris and signed in 2016.
Submission	Feedback and views from individuals or organisations on a proposal (e.g. in a discussion document), which they send to the Council.
Sustainable Lifestyle Capital	A sustainable lifestyle capital is NPDC vision and mission statement. The vision is to provide our people with an innovative and resilient district that restores mauri, protects our environment and supports a successful economic transition, while providing quality infrastructure and leadership through operational excellence.
Thermal dryer	NPDC's Thermal Drying Facility creates Bio-Boost™ from dried sludge from wastewater process. This prevents sludge having to go to landfill and becoming a source of landfill gas made up of ~50% Methane. Bio-Boost™ also offsets the use of organic fertiliser offsetting usage of synthetic fertilisers which have a larger carbon footprint.
Top 10 Korero	Consultation on 10 topics which were important to NPDC's Long-Term Plan 2018-2028. Climate response was one of these topics.
Urban form	The three dimensional shape of a town or city. It is the result of the shape of the land, plus the shape of the built environment on it.
Waste Management and Minimisation Plan	Our aim at NPDC is to achieve Zero Waste. The New Plymouth District Waste Management and Minimisation Plan sets out how we are going to move towards this goal. It lays out NPDC's vision, objectives and targets for reducing waste, and details how we will accomplish and fund these objectives.
Water Conservation Programme	NPDC runs a Wai Warrior Campaign to provide education and support with water conservation in the district.

Contact NPDC
P: 06-759 6060 E: enquiries@npdc.govt.nz

More information:
npdc.govt.nz NewPlymouthDistrictCouncil @NPDCouncil