CHAPTER 10:

Transport

Transport

Lead

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Supporting

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Contribution to our long-term vision

By 2035, Aotearoa New Zealand will have significantly reduced transport-related carbon emissions and have a more accessible and equitable transport system that supports wellbeing.

Contribution to Aotearoa New Zealand's greenhouse gas emissions (AR5) in the first emissions budget period

Projected emissions without the initiatives in this plan	66.5 Mt CO_2-e
Projected average annual emissions without the initiatives in this plan	16.6 Mt CO_2-e
Projected percentage of total gross emissions without the initiatives in this plan	21 per cent
Estimated emissions reduction from the initiatives in this plan	1.7 to 1.9 Mt CO_2-e

Transport

Why reducing transport emissions is important

Transport is one of our largest sources of greenhouse gas emissions and is responsible for 17 per cent of Aotearoa New Zealand's gross emissions.

More sustainable transport options can also reduce the cost of transport and reliance on global fossil fuel markets.

Key actions

- Reduce reliance on cars and support people to walk, cycle and use public transport including by:
  - improving the reach, frequency and quality of public transport and making it more affordable for low-income New Zealanders
  - increasing support for walking and cycling, including initiatives to increase the use of e-bikes
  - ensuring safer streets and well-planned urban areas.
- Rapidly adopt low-emissions vehicles including by:
  - continuing to incentivise the uptake of low- and zero-emissions vehicles through the Clean Vehicle Discount scheme and consider the future of the road user charge exemption for light electric vehicles beyond 2024
  - increasing access to low- and zero-emissions vehicles for low-income households by supporting social leasing schemes and trialling an equity-oriented vehicle scrap-and-replace scheme
  - improving EV-charging infrastructure across Aotearoa to ensure that all New Zealanders can charge when they need to.
- Begin work now to decarbonise heavy transport and freight including by:
  - providing funding to support the freight sector to purchase zero- and low-emissions trucks
  - requiring only zero-emissions public transport buses to be purchased by 2025
  - supporting the uptake of low-carbon liquid fuels by implementing a sustainable aviation fuel mandate and a sustainable biofuels obligation.

Our path to net-zero transport will deliver a better transport system and improve wellbeing

Decarbonising the transport system will deliver better transport for everyone in Aotearoa New Zealand and contribute to more vibrant, resilient and prosperous places to live, work and visit. It will reduce our reliance on volatile global energy markets.

By 2035, all new cars will be low or zero emissions, and significant progress will have been made to decarbonise more challenging transport modes, such as trucks, ships and planes. This will result in vehicles that are cleaner and more affordable to run, and reduce the significant harm caused by air and noise pollution.

More people will be able to walk, cycle and use public and shared transport options, particularly in our largest urban areas. This will reduce congestion, air pollution and noise, create better places to live in, and support public health and wellbeing.

As a result, we will have a more sustainable, inclusive, safe and accessible transport system that better supports economic activity and community life.

Achieving this vision will require transformational changes that will be challenging. The Government has a clear role to play, but this vision requires local government, Māori, businesses and communities to do their part.

The challenge is to deliver change at the pace and scale required to achieve the necessary reduction in transport emissions, while also giving all New Zealanders access to the significant co-benefits that will accompany our transition to a low-emissions transport system.

Transport is one of our largest sources of emissions

Transport is one of our largest sources of greenhouse gas emissions. It is responsible for:

- approximately 17 per cent of gross domestic emissions
- 39 per cent of total domestic CO_2 emissions.[1]

To reach net-zero long-lived emissions by 2050, we need to largely decarbonise transport. Urgent action and system-wide changes are needed to put our transport emissions on the trajectory to a low-emissions future.

The current transport system is also inequitable. Māori, Pasifika, disabled people, low-income households, women, older people, children and rural communities are often underserved by the transport system. They are also overburdened by related negative impacts, such as deaths, serious injuries and illness from transport crashes, and pollution. To ensure an equitable transition, the transport system needs to be more inclusive and affordable.

Current and projected transport emissions

References to current transport emissions are based on the 2019 greenhouse gas estimates from New Zealand's Greenhouse Gas Inventory 1990–2020, published in April 2022. Transport emissions estimates are around 10 per cent lower than New Zealand's previous Greenhouse Gas Inventory 1990–2019, published in April 2021. This drop is due to a reallocation of fuel use from the transport sector to the rest of the energy sector and implies that underlying road transport fuel efficiency is higher than previously estimated. Projected emissions for transport, including emissions reductions, are based on the previous 1990–2019 Greenhouse Gas Inventory, because the transport models used could not be updated in time for publication. This means that projected transport emissions and emissions reductions are likely to be lower when the Government revises its projections using the latest inventory data.

1 These figures are an estimate of 2019 transport emissions based on New Zealand's Greenhouse Gas Inventory 1990–2020.

Actions the Government is taking to reduce transport emissions

This section outlines the Government's approach to reducing transport emissions. While the immediate focus is on action over the next three years, this approach lays the foundation for the next 30 years. Three focus areas guide this approach to reducing transport emissions:

- reduce reliance on cars and support people to walk, cycle and use public transport
- rapidly adopt low-emissions vehicles
- begin work now to decarbonise heavy transport and freight.

The Government is committing to four transport targets

The Government has set four transport targets that will support these focus areas and align with achieving the sector sub-targets for transport.[2] This is approximately equivalent to a 41 per cent reduction in transport emissions by 2035 from 2019 levels.[3]

- **Target 1 –** Reduce total kilometres[4] travelled by the light fleet by 20 per cent by 2035 through improved urban form and providing better travel options, particularly in our largest cities.
- **Target 2 –** Increase zero-emissions vehicles to 30 per cent of the light fleet by 2035.
- **Target 3 –** Reduce emissions from freight transport[5] by 35 per cent by 2035.
- **Target 4 –** Reduce the emissions intensity of transport fuel by 10 per cent by 2035.

2 Sector-sub targets are based on the Climate Change Commission's demonstration path that is benchmarked to New Zealand's Greenhouse Gas Inventory 1990–2019, as opposed to the 1990–2020 Inventory.

3 This 41 per cent is calculated using the New Zealand Greenhouse Gas Inventory 1990–2019, as opposed to the latest 1990–2020 inventory.

4 Kilometres refers to Vehicle Kilometres Travelled (VKT).

5 This target for freight transport includes emissions from trucks, rail and ships. It excludes light vehicles and aviation.

The targets provide guidance on how much effort is required to reduce transport emissions across the system and will shape our policy and investment decisions to support the scale and pace of change required.[6]

To achieve these targets, the Government must work with key partners to take the initial actions outlined in this chapter over the first emissions budget period (2022–25). This includes partnering with Māori to incorporate Māori-led solutions and supporting communities and businesses for an equitable transition.

Further action and refinement will be needed in the second (2026–30) and third (2031–35) emissions budgets depending on how we are tracking.

Achieving the transport targets also depends on complementary policies, such as a strong New Zealand Emissions Trading Scheme (NZ ETS) price to incentivise low-emissions fuels, and changing the way we plan our towns and cities to make it easier and safer for people to reduce car travel.

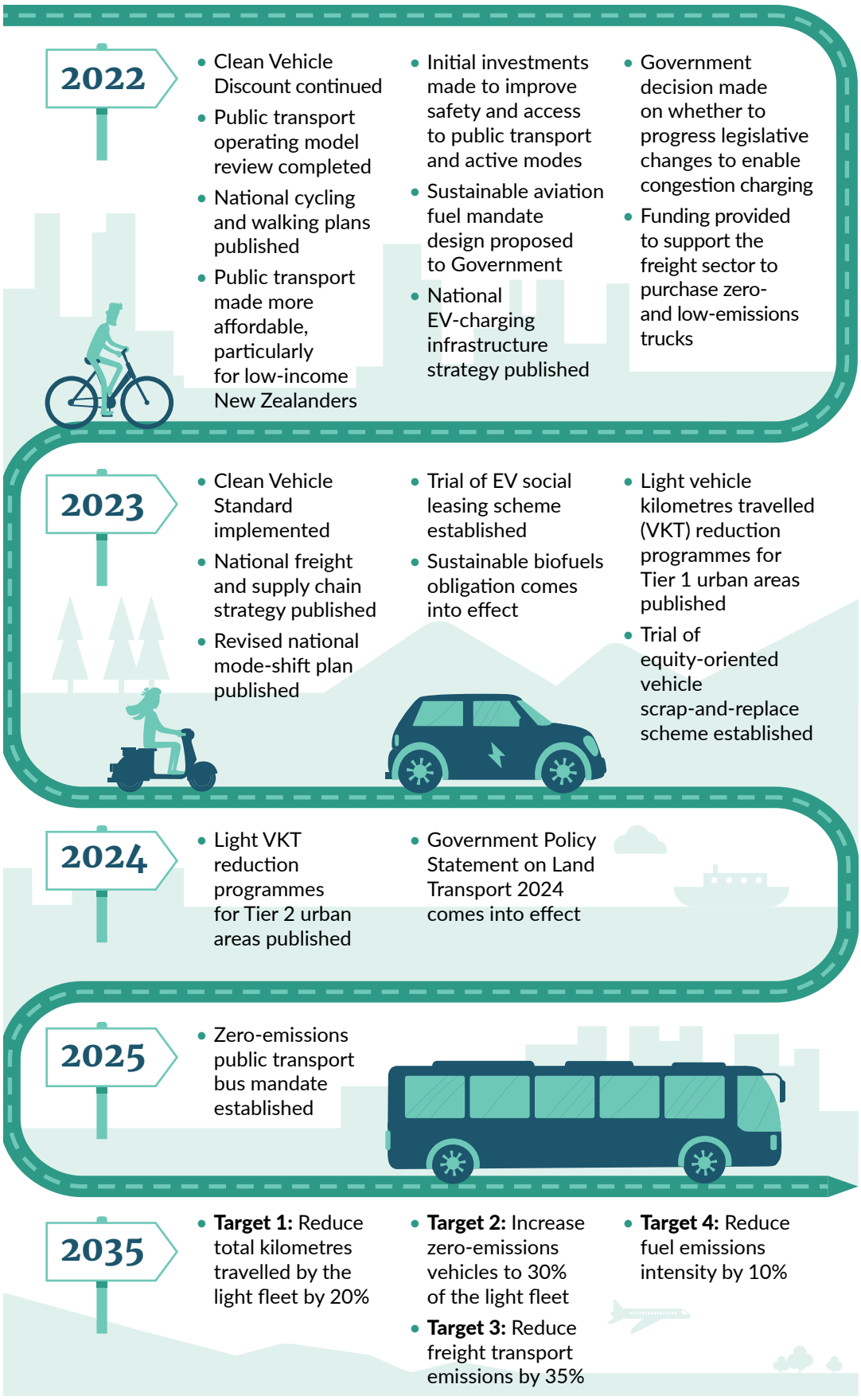
Many of the actions in this plan will also support an equitable transition, including by making clean and affordable transport options more accessible for low-income and transport disadvantaged New Zealanders.

Route map to 2035

Figure 10.1 highlights some of the key actions in this plan that will put Aotearoa on track for achieving the four transport targets set for 2035.

6 The targets are closely interrelated. The projected impact of achieving each target is conditional on achieving one or more of the others. Target 1 reflects a change compared to the Te Manatū Waka Ministry of Transport's baseline projection for 2035. Target 2 is against the 2035 fleet projection, given the effects of achieving Target 1 on the size of the fleet. Target 3 is compared to the level of emissions from freight transport in 2019. Target 4 is conditional on undertaking activities as part of achieving Targets 1 to 3 that would bring about lower projected liquid fossil fuel use in 2035.

Figure 10.1. Transport route map to 2035



Focus area 1: Reduce reliance on cars and support people to walk, cycle and use public transport

Transport target 1

Reduce total kilometres travelled by the light fleet by 20 per cent by 2035 through improved urban form and providing better travel options, particularly in our largest cities.

The amount people travel in fossil-fuelled vehicles is at the heart of the transport emissions challenge. We cannot rely on just decarbonising the vehicle fleet quickly. Improving urban form, offering better transport options, and using other demand management levers to reduce VKT by cars is vital. Most of this reduction needs to occur in our largest cities, where people are more likely to have transport options other than travelling by car. These measures can also deliver significant benefits beyond reducing emissions, such as improving travel choice and accessibility, better health and safety, and less congestion.

CASE STUDY

THE QUEENSTOWN PACKAGE

The Queenstown Package reprioritises existing infrastructure to provide dedicated public transport and active mode infrastructure for communities in the Queenstown area. A response to growing population and existing traffic congestion, it is part of the New Zealand Upgrade Programme.

The NZ$115 million package will deliver the infrastructure needed for more reliable public transport services, and provide more travel options that are safer, healthier and better for the environment. When aligned with spatial planning, it will lead to more housing choices, better transport options and well-designed neighbourhoods that provide for everyday needs.

Action 10.1.1: Integrate land-use planning, urban development and transport planning and investments to reduce transport emissions

Reducing transport emissions offers major opportunities to also create better places for people to live, work and play.

To deliver this, land-use planning and infrastructure investments will allow more people to live in existing urban areas, where social and economic opportunities are greatest. Frequent and rapid public transport services will form the backbone of major urban developments and be well-connected with walking and cycling networks (see chapter 7: Planning and infrastructure).

Key initiatives

- Better integrate transport planning and land-use planning through the resource management reforms.
- Develop the evidence base and tools to quantify and assess transport emissions from proposed transport and urban developments.
- Assess spatial plans to understand emissions implications and key risks and opportunities for reducing emissions.
- Incorporate transport-emissions impact assessments into transport plans.
- Identify ways to incentivise developments that avoid/reduce the need to travel and encourage travel by public transport, walking and cycling.
- Require new investment for transport projects to demonstrate how they will contribute to emissions-reduction objectives and set a high threshold for approving new investment for any transport projects if they are inconsistent with emissions-reduction objectives.

Action 10.1.2: Support people to walk, cycle and use public transport

New Zealanders need better public transport choices and it must be safer and easier to travel by active modes. Increasing travel by public transport, walking and cycling, will see significant benefits for New Zealanders beyond reducing emissions. This includes improved travel choice and accessibility, better health and safety, and less congestion.

Key initiatives

A. Planning – design programmes to reduce total light fleet VKT in our largest cities.

- Set sub-national VKT reduction targets for Aotearoa New Zealand's major urban areas (Tier 1 and 2[7]) by the end of 2022.
- Revise Waka Kotahi NZ Transport Agency's national mode shift plan (Keeping Cities Moving) to ensure nationally led activities align with the pace and scale of VKT reduction and mode shift required in urban areas.
- Develop VKT reduction programmes for Aotearoa New Zealand's major urban areas (Tier 1 and 2) in partnership with local government, Māori and community representatives.

B. Public transport – improve the reach, frequency and quality of public transport.

- Deliver a national public transport strategy.
- Complete the review of the public transport operating model.
- Deliver major public transport service and infrastructure improvements in Auckland, Wellington and Christchurch.
- Deliver nationally integrated ticketing for public transport.
- Support a major uplift in all urban bus networks nationwide, including by improving bus driver terms and conditions.
- Consider improvements to, and new opportunities for, interregional public transport services.
- Identify and consider addressing barriers to integrating public transport with active and micro-mobility modes and networks.

C. Walking and cycling – deliver a step change in cycling and walking rates.

- Substantially improve infrastructure for walking and cycling.
- Support initiatives to increase the uptake of e-bikes.
- Deliver a national plan to significantly increase the safety and attractiveness of cycling and micromobility (eg, electric scooters).
- Deliver a national plan to significantly increase the safety and attractiveness of walking.

7 Tier 1 covers Auckland, Hamilton, Tauranga, Wellington, and Christchurch. Tier 2 covers Whangārei, New Plymouth, Napier Hastings, Palmerston North, Nelson Tasman, Queenstown, and Dunedin.

- Provide support for local government to develop network plans for walking and cycling.
- Implement Accessible Streets proposals nationwide to support safe walking, cycling/scootering and other active modes.

D. Reshaping streets – accelerate widespread street changes to support public transport, active travel and placemaking.

- Incentivise local government to quickly deliver bike/scooter networks, dedicated bus lanes, and walking improvements by reallocating street space (including during street renewals).
- Consider regulatory changes to make it simpler and quicker to make street changes.
- Scale up Waka Kotahi NZ Transport Agency's Innovating Streets for People programme to rapidly trial street changes.

E. School travel – make school travel greener and healthier.

- Set targets for active travel to and from schools and work with councils and schools to implement active transport plans around schools.
- Improve walking and cycling infrastructure to and along school routes, in schools, and in surrounding neighbourhoods.
- Implement the Tackling Unsafe Speeds programme to ensure safer speed limits around schools.
- Investigate opportunities to improve school bus services.
- Explore dedicated active transport funding and/or education programmes for schools.

F. Equity – improve access and travel choice for the transport disadvantaged.

- Work with local government to deliver public transport, cycling and walking improvements in low socio-economic areas and for transport disadvantaged groups[8] (including disabled people).
- Investigate opportunities to improve access for people living in social housing through shared mobility schemes, such as car-share, carpool and bike/scooter schemes.
- Work with local government to make public transport more affordable, with a particular focus on low-income users.

G. Rural areas – investigate the potential for public transport, walking and cycling in rural and provincial areas.

- Investigate the potential for public transport, shared services, walking and cycling in rural and provincial areas, particularly for the transport disadvantaged.
- Investigate further opportunities to provide on-demand public transport in provincial towns, in light of positive signs from the MyWay trial in Timaru.

8 'Transport disadvantage' includes people who have limited options to participate in everyday activities because of a lack of transport choices, and people who overcome lack of transport choice by paying more than they can reasonably afford for mobility. These people include disabled people, who are more likely than others to experience transport poverty, and have specific accessibility needs, which reduces their choices.

Action 10.1.3: Enable congestion charging and investigate other pricing and demand management tools to reduce transport emissions

Pricing tools, such as congestion charging, provide an opportunity to reduce emissions, improve congestion and support shifts to public and active transport modes. Enabling congestion charging could encourage better use of our transport system and reduce the need for expensive and emissions-intensive infrastructure investments.

Key initiative

- Following the recent Inquiry of the Transport Select Committee, the Government is considering progressing legislative changes to enable congestion charging. If the Government decides to progress, it will work with Auckland Council to design a scheme, engage with other councils at their request (eg, Wellington) and investigate ways to mitigate possible adverse financial impacts of congestion charging on low-income households.

Other initiatives

- Investigate additional pricing tools to reduce transport emissions (including parking pricing, VKT pricing and low-emissions zones).
- Review the revenue system in response to longer-term changes in the way New Zealanders travel.
- Explore a pilot Mobility as a Service project.

Action 10.1.4: Require roadway expansion and investment in new highways to be consistent with transport targets

New highways and road expansion projects are sometimes needed to support urban and housing development and the efficient movement of freight, but they can increase emissions by inducing more private vehicle travel. Further investment that expands roads and highways needs to be consistent with transport targets and avoid inducing further travel by private vehicles.

Key initiative

- Establish a high threshold for new investment to expand roads, including new highway projects, if the expansion is inconsistent with emissions-reduction objectives.

Action 10.1.5: Embed nature-based solutions as part of our response to reducing transport emissions and improving climate adaptation and biodiversity outcomes

Nature-based solutions refers to the sustainable management and use of natural features and processes to tackle socio-environmental challenges, such as climate change.

For transport, opportunities to apply nature-based solutions at a local, regional and national scale can reduce transport emissions and improve climate adaptation as well as biodiversity outcomes.

Key initiatives

- Consider the role of nature-based solutions in reducing transport emissions and contributing to other benefits.
- Ensure transport policy and investment settings encourage the use of nature-based solutions, including protecting existing carbon sinks and support for new long-term carbon sequestration opportunities where appropriate.

Focus area 2: Rapidly adopt low-emissions vehicles

Transport target 2

Increase zero-emissions vehicles to 30 per cent of the light fleet by 2035.

Two-thirds of transport emissions come from the light vehicle fleet. Alongside reducing reliance on light vehicles, decarbonising the light vehicle fleet is critical for meeting our targets.

Aotearoa has begun to decarbonise its light vehicle fleet. The Clean Vehicle Standard and Discount Scheme has already provided 14,500 (as at 11 April 2022) rebates to vehicle buyers and helped to triple monthly EV sales (from 500 per month to 1,500). EV sales are 12.1 per cent of sales of brand new passenger vehicles so far in 2022.[9] Light EVs are also exempt from paying road user charges.

The Clean Car Sector Leadership Group has also been established to advise on measures to accelerate the uptake of clean vehicles, including measures to address future supply constraints. Where practicable, government agencies are transitioning to low-emissions fleets.

We need to do more to encourage the rapid uptake of low- and zero-emissions vehicles and, to ensure an equitable transition, make them accessible for more New Zealanders.

9 Year to date January–March.

CASE STUDY

OHOMAIRANGI TRUST

Ohomairangi Trust is a kaupapa Māori early-intervention service based in Māngere, Auckland. The Trust helps families in the community by providing parent training courses, transport, meals and childcare.

When vehicles in the Trust's petrol fleet needed renewal, the team opted for an electric fleet to reduce their carbon footprint and explore potential cuts to running costs. Electric vehicles (EVs) would work perfectly for the short urban trips that make up most of their travel and whānau transport and home visits.

In 2018, with co-funding from the Low Emission Transport Fund (managed by the Energy Efficiency and Conservation Authority), the Trust bought six EVs, a mixture of new and used. Choosing mostly used vehicles helped keep costs down.

The 80–120 km range of the Nissan Leaf and Nissan eNV200 van is ideal for the Trust's teachers, therapists and specialists, and their short local journeys. The 200 km range of the Hyundai Ioniq enables work in the regions.

To get staff onside, the Trust's transport coordinator created his own driver training manual and trained each staff member individually. Some staff were nervous at first. They worried about the unfamiliar technology and being stranded with a dead battery. But adaptation was easy, and staff soon appreciated the quietness, reliability and ease of recharging.

The EVs are running well and have significantly reduced the Trust's running costs. Petrol was costing up to NZ$2,000 a month and rising. Now they spend significantly less, even on charging. The Trust no longer pays road user charges because light electric vehicles are exempt until 2024. Servicing and registration costs have fallen compared with equivalent petrol vehicles. Maintenance costs are minimal, with no tune-ups, cambelts or oil changes needed.

The Trust has shown that investment in EVs is great for the environment and operating costs. The Trust has since bought two more electric cars. Their fleet is currently half electric, with all-electric being the long-term goal. Robert says, "We cannot go on driving petrol- and diesel-powered vehicles – the sooner we all change, the better."

Action 10.2.1: Accelerate the uptake of low-emissions vehicles

The Government will build on existing policies to accelerate the uptake of low- and zero-emissions vehicles. For Aotearoa households, this will reduce fuel bills and vehicle maintenance costs. Cleaner vehicles will also improve air quality, reducing the significant harm caused by air pollution.

Key initiatives

- Continue to incentivise the uptake of low- and zero-emissions vehicles through the Clean Vehicle Discount scheme and consider the future of the road user charge exemption for light vehicles beyond 2024.
- Implement the Clean Vehicle Standard to increase the quantity and variety of low- and zero-emissions vehicles supplied to Aotearoa.
- Consider further measures needed – from 2027 – to increase the fuel efficiency of the imported fleet and avoid high-emitting vehicles being dumped onto our market. This will help avoid Aotearoa becoming a dumping ground for high emitting vehicles.
- Set a maximum CO_2 limit or penalties for individual light internal combustion engine vehicle imports to tackle the highest emitting vehicles.
- Establish whether the Clean Vehicle Discount can be extended to other vehicle classes.
- Investigate how the tax system can support clean transport options to ensure low-emissions transport options are not disadvantaged.
- Determine whether legislative barriers preventing the use of some types of light low-emissions vehicles can be reduced without unduly compromising safety objectives.

Action 10.2.2: Make low-emissions vehicles more accessible for low-income and transport disadvantaged New Zealanders

The Government will help low-income and transport-disadvantaged New Zealanders move away from high-emitting vehicles, including by making low-emissions vehicles more accessible. This will help to ensure that all New Zealanders get the benefits of cleaner vehicles.

Key initiatives

- Support social leasing schemes to make access to cleaner vehicles affordable for low-income households.
- Implement an equity-oriented vehicle scrap-and-replace-scheme trial to make cleaner vehicles and low-emissions alternatives affordable for low-income households.
- Investigate whether further targeted support is required to make low-emissions vehicles more accessible and affordable for other disadvantaged groups and communities.

Action 10.2.3: Support the rollout of EV charging infrastructure

The Government has already co-funded 1,000 public chargers and will continue to improve EV charging infrastructure across Aotearoa to ensure that all New Zealanders can charge when they need to. Charging infrastructure will be accessible, affordable, convenient, secure and reliable for everyone.

Key initiatives

- Continue to develop an EV-charging infrastructure work programme to coordinate policy, investment and engagement with stakeholders.
- Complete a national EV-charging infrastructure strategy to set out the Government's vision and policy objectives (for both the public and private sectors) around EV charging over future emissions budget periods.
- Review the Electricity (Safety) Regulations 2010 to cover the safety needs associated with charging EVs.

Focus area 3: Begin work now to decarbonise heavy transport and freight

Transport target 3

Reduce emissions from freight transport by 35 per cent by 2035.

Reducing emissions from freight transport will be critical to achieving a 41 per cent reduction in transport emissions by 2035. Heavy vehicles, most of which are for freight, emit almost a quarter of our total transport emissions.

Transport target 4

Reduce the emissions intensity of transport fuel by 10 per cent by 2035.

Aotearoa also needs to reduce emissions from the fuels used for transport. Low-carbon liquid fuels, such as biofuels, will play a role, alongside electrification, the use of hydrogen and other technologies. Low-carbon liquid fuels are one of the best options for vehicles already in use, and for hard-to-decarbonise transport sectors, such as aviation and coastal shipping.

The Government's Low Emission Transport Fund has co-funded a range of initiatives to accelerate transport decarbonisation. In early 2022, this included demonstration funding for typically hard to decarbonise sectors, including battery-swap electric truck technology for milk tankers and concrete mixers.

CASE STUDY

WASTE MANAGEMENT NEW ZEALAND

Waste Management New Zealand (WMNZ) is one of Aotearoa New Zealand's leading waste and environmental services provider, offering recycling and resource recovery services, and waste collection and disposal.

In 2016, WMNZ committed to reducing emissions from its fleet. They started to transition some of their diesel fleet and invest in cars to help limit climate change and contribute to Aotearoa New Zealand's circular economy. Today WMNZ operates one of the largest EV truck fleets in Australasia. It also has 93 electric cars in its light fleet.

WMNZ's collection trucks each travel an average of 200 km per day. Their work is stop-start — the driver stops to empty each bin — which is perfect for electric. At each stop, the deceleration creates energy that recharges the truck's on-board batteries. To date, one of those electric trucks has driven about 80,000 km on duty in Auckland. It runs 11 hours and collects 1,200 bins in a day.

WMNZ also captures the gas produced from waste at its landfills. This is converted into electricity and supplies the national grid.

In an agreement with the Energy Efficiency and Conservation Authority, WMNZ developed an electric truck conversion workshop in Auckland. Opened in 2018, the workshop works on WMNZ's fleet and the company helps other companies in Aotearoa with their EV transition too.

If fully diesel, WMNZ's truck fleet would need 10 million litres of diesel a year. Each electric truck that replaces a diesel-powered vehicle, saves 125 litres of diesel a day. Converting the entire WMNZ fleet would save 100,000 litres of diesel a day.

Staff have been upskilled to drive, maintain and complete truck conversions in Aotearoa, and manage the fleet's EVs, keeping the company at the forefront of EV technology globally. WMNZ's EV programme now includes 27 fully electric trucks, including trucks in Hutt Valley and Dunedin.

Action 10.3.1: Support the decarbonisation of freight

Decarbonising the freight sector will be challenging and require consideration of the entire supply chain. Moving towards a more sustainable freight system will reduce harmful diesel emissions, reduce noise pollution, and may provide operating efficiencies to commercial freight businesses.

Key initiatives

- Develop a national freight and supply chain strategy with industry. This strategy will take a long-term, system-wide view of the freight and supply chain. Working with industry it will identify how to best decarbonise the freight transport system to be net zero by 2050, while improving the efficiency and competitiveness of the supply chain.
- Continue to implement the New Zealand Rail Plan and support coastal shipping.
- Provide funding to support the freight sector to purchase zero- and low-emissions trucks.
- Establish a freight decarbonisation unit to help decarbonise the freight sector through regulation and investment policy.
- Evaluate options to:
  - improve the efficiency of heavy vehicles
  - regulate heavy vehicles imports to reduce emissions
  - support infrastructure development for green fuels and fast charging for heavy vehicles
  - reduce emissions from heavy vehicles operated or procured through government activities.
- Evaluate options for road user charges (RUC) to support emissions reductions, including whether to extend the heavy-EV exemption from RUC and whether to set RUC rates differently by fuel type/emissions.
- Consider the implementation timing of Euro VI standard for heavy vehicles.

Action 10.3.2: Accelerate the decarbonisation of the public transport bus fleet

Decarbonising the bus fleet is increasingly important as more people are encouraged to travel by bus. Cleaner buses will not only reduce emissions – they will improve air quality and amenity in our towns and cities.

Key initiatives

- Require only zero-emissions public transport buses to be purchased by 2025, set a target to decarbonise the public transport bus fleet by 2035, and support regional councils to achieve these outcomes through additional funding.
- Identify and remove barriers to decarbonising the public transport bus fleet through the Public Transport Operating Model review.

Action 10.3.3: Work to decarbonise aviation

Air travel has a role in moving both people and freight to domestic and international destinations. In many cases, air travel is a core mode for inter-city and interregional travel. This means improving its sustainability is critical, alongside improving alternatives to interregional air travel in some places.

Key initiatives

- Develop and set specific targets for decarbonising domestic aviation in line with our 2050 targets.
- Establish a public-private leadership body focused on decarbonising aviation, including operational efficiencies, infrastructure improvements and frameworks to encourage research, development and innovation in sustainable aviation.
- Implement a sustainable aviation fuel mandate.

Action 10.3.4: Progress the decarbonisation of maritime transport

The Government has acceded to Annex VI of the International Convention for the Prevention of Pollution from Ships. This is an international agreement to address climate change impacts from shipping. It commits us to implementing future greenhouse gas measures agreed at the International Maritime Organization for Aotearoa-flagged ships and foreign ships operating in our waters.

Key initiatives

- Develop a national action plan to reduce commercial and recreational maritime emissions.
- Set new targets for maritime emissions, including:
  - supporting the uptake of zero-emissions small passenger, coastal fishing and recreational vessels
  - all new large passenger, cargo, and offshore fishing vessels to meet highest carbon-intensity reduction, as set by the International Maritime Organization, by 2035.
- Undertake research to advance the development and uptake of alternative low- and zero-carbon fuels for shipping in Aotearoa and developing safety and environmental standards for their use.
- Work with other like-minded countries to put in place the conditions to allow low- or zero-carbon shipping on key trade routes by 2035.

Action 10.3.5: Implement the Sustainable Biofuels Obligation

In 2021, the Government introduced the Sustainable Biofuels Obligation to help overcome the cost and risk barriers to sustainable biofuels uptake. Sustainable biofuels are a renewable, low-emissions fuel source that can be used immediately to reduce our transport emissions.

Key initiative

- Implement the Sustainable Biofuels Obligation, which requires liable fuel suppliers to reduce the total emissions of the fuels they supply by a set percentage each year through the deployment of biofuels (in blended or in neat form).

  The obligation applies to all liquid fossil fuel for transport refined in or imported into Aotearoa, excluding aviation fuel.

  This initiative is supported by an action to accelerate the supply and uptake of Aotearoa New Zealand's bioenergy market (see chapter 9: Circular economy and bioeconomy).

Cross-cutting measures to contribute to the delivery of a low-emissions transport system

To decarbonise transport in Aotearoa, the Government will need to provide consistent signals and guidance. Aligning policy and long-term planning with the emissions reduction plan, providing evidence, and supporting people and business with behaviour change, skills and capability are all essential to a rapid and equitable transition.

Action 10.4: Support cross-cutting and enabling measures that contribute to the delivery of a low-emissions transport system

Cross-cutting and enabling actions are important to help us understand the changes required and the impact of our choices on reducing transport emissions. These will help us to design a stronger and more equitable low-emissions transport system.

Key initiatives

- Ensure the next Government Policy Statement on Land Transport guides investment that is consistent with the emissions reduction plan.
- Develop a strong evidence base to inform transport decarbonisation and an equitable transition, and to ensure actions taken are effective within the Aotearoa context.
- Embed long-term transport planning to give greater confidence that we are on the right path to eliminate emissions and achieve other goals.
- Provide people and businesses with information and education to support behaviour change as we transition to a low-carbon economy.
- Develop the skills and capability required to transition to a low-emissions transport system and support an equitable transition.

Managing whole-of-life carbon dioxide emissions in transport infrastructure

This chapter addresses emissions from vehicle use. It does not cover embodied or operational emissions from infrastructure construction, maintenance and operation – some of these emissions are addressed in the chapter 12: Building and construction.

A whole-of-life approach to transport emissions should consider emissions that arise from constructing and maintaining transport infrastructure – such as streets and roads, rail and ports.

The operators of a large proportion of transport infrastructure are Crown agencies, and they will be expected to measure, verify, report and reduce emissions from their operations under the Carbon Neutral Government Programme. This approach also supports a circular economy.

The Government is considering how to manage whole-of-life carbon in the aviation and maritime sectors.

What these actions mean for the emissions budgets

We are on track for the first emissions budget period

Aotearoa has made a good start to reduce transport emissions. The Government has made several commitments over the past year that have put transport on track to achieve its targets for the first emissions budget period. This includes the Clean Vehicles package, progress on decarbonising the public transport bus fleet, road user charges exemption policies and introducing a sustainable biofuels obligation.

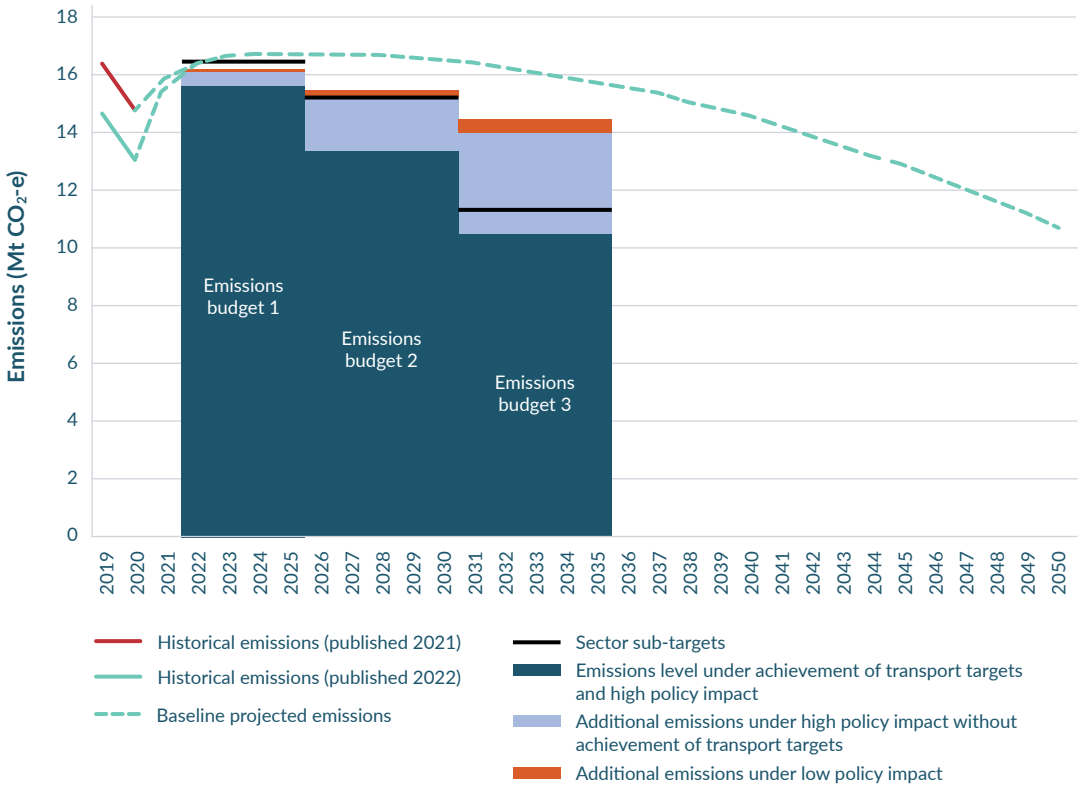
Under high NZ ETS price conditions,[10] the estimated cumulative impact of these policies is between 1.7 Mt CO_2-e and 1.9 Mt CO_2-e over the 2022–25 period. Along with changes in the vehicle fleet's profile and fuel efficiencies over time, these policies are estimated to achieve the emissions reductions required to meet the transport sub-sector target for the first emissions budget period (see figure 10.2).[11]

The Government is confident that we will achieve the first emissions budget based on this analysis and that New Zealanders will benefit from greater access to low-emissions vehicles, which are cheaper to run and improve the quality of our fleet.

10 The high NZ ETS price conditions modelled by the Ministry of Transport reflect the price path used in the Commission's modelling and are higher than the baseline NZ ETS price settings.

11 Emissions reduction estimates are benchmarked to New Zealand's Greenhouse Gas Inventory 1990–2019.

Figure 10.2. Estimated transport emissions based on achieving transport targets



This initial plan will make a good start towards meeting the second and third emissions budgets

Achieving the transport targets set out in this plan aligns with achieving the sub-sector targets for transport. This is approximately equivalent to a 41 per cent reduction in transport emissions by 2035 from 2019 levels (see figure 10.2).[12]

The targets provide guidance on how much effort is required across the system to put us on a pathway to net-zero carbon by 2050. We know from our modelling and international evidence that the actions included in this plan will make significant progress towards the second and third emissions budgets. However, further policy development is needed to determine the specific abatement that many of the actions will achieve.

Further transport actions and refinement will be needed in the second and third emissions budgets depending on how we are tracking.

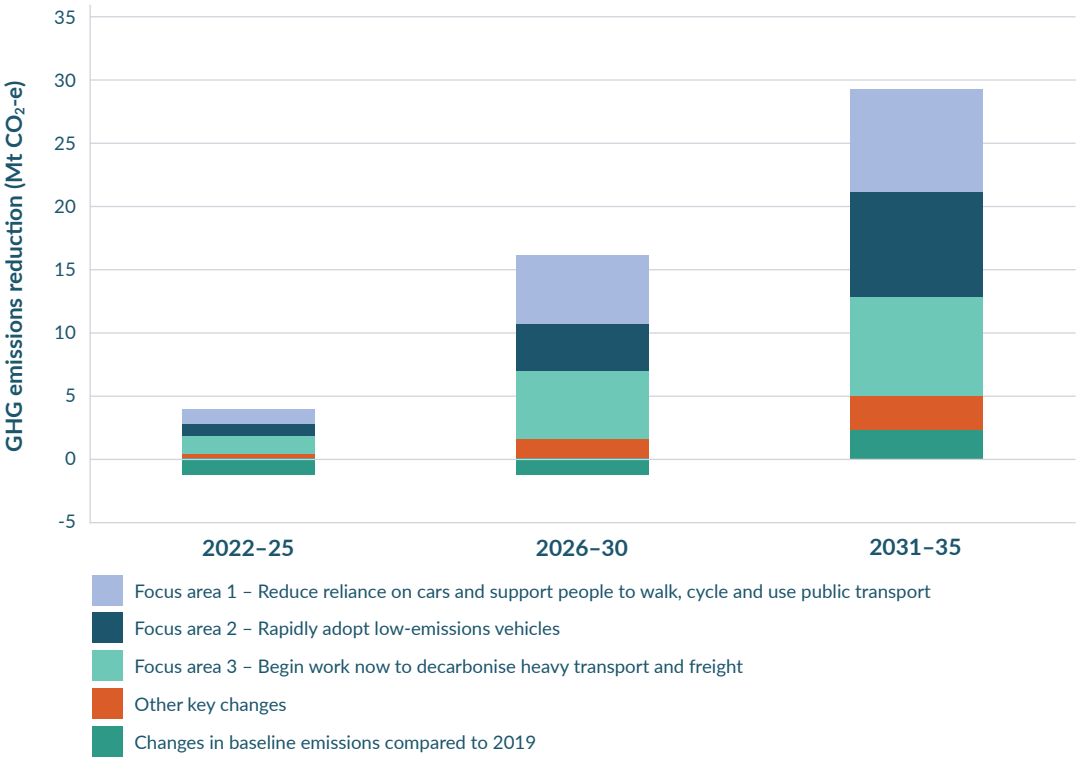
12 This 41 per cent is calculated using New Zealand's Greenhouse Gas Inventory 1990–2019, as opposed to the latest 1990–2020 Inventory.

Potential emissions reductions for each focus area

Figure 10.3 illustrates how each focus area can contribute to achieving the transport sector sub-target.

Baseline changes include the effects of growth in the vehicle fleet and electrification of the vehicle fleet under business as usual. Other key changes include the impacts of the NZ ETS price on electrification and travel. Focus areas 2 and 3 both include the impact of alternative fuels (eg, biofuels).

Figure 10.3. Potential emissions reductions for each focus area, compared to 2019[13]



Risks and uncertainties

This modelling is based on assumptions about what could happen in the future and how effective our actions could be in making changes. The pace and scale of transport emissions reductions will be affected by a range of factors.

For example, changes in how we live, work and travel could support or hinder our ability to achieve a zero-carbon transport system. Changes to technologies, the availability and cost of alternative fuels, and changes in freight demand will also affect our ability to achieve the transport targets.

13 Emissions reduction projections are benchmarked to New Zealand's Greenhouse Gas Inventory 1990–2019.

The ambitious transport targets that have been set are challenging to achieve. This means that delaying action would result in harder and more costly measures in the future, as well as reducing our chance of achieving the transport targets.

We all have a role to play in reducing transport emissions

The Government has a clear role to play in reducing transport emissions, but it cannot achieve this alone. A combined effort is required to reduce emissions and build a healthy, safe and accessible transport system.

Local government has a major role in planning and funding regional and local transport. Decisions made by councils about urban form and transport infrastructure, including for active and public transport, determine how we move around our towns and cities. Bold decisions and strong collaboration with central government will be needed to ensure a joined-up approach to decrease transport emissions.

The private sector (businesses) is a major investor and employer in the transport system. Businesses also rely on transport for moving people, goods and services. The private sector can strongly support changes in the system through a range of mechanisms, from education and innovation to investment.

Communities grow the mandate for change and make change happen. All New Zealanders have a stake in our transport system and can influence its direction. This includes community advocacy groups, such as cycling and neighbourhood groups. Change will vary across communities and effort will be needed to ensure all New Zealanders are equitably served.

Māori partnership will be important to deliver equitable transport outcomes for Māori living in urban centres, in rural communities and on marae. Future work on policies must also consider how to mitigate social and equity impacts that transport policies might create for Māori and what solutions could be put in place to address these issues.

The Ministry of Transport will work in partnership with Māori as the policies for this plan and future emissions reduction plans are progressed. This will build partnerships to uphold the principles of Te Tiriti o Waitangi.

Helping the transport sector adapt to the effects of climate change

The transport sector faces challenges under Aotearoa New Zealand's changing climate, from managing coastal and flood-prone assets to supporting communities during climate-related events where transport infrastructure is often a lifeline asset.

The transport sector is starting to build climate change adaptation into the planning and design of future infrastructure and has plans in place to respond to emergency events (though the costs of this are continuing to increase).

The significant anticipated investment to reduce and remove emissions could also be used to support adaptation and increase resilience to climate change impacts, and in some cases vice versa. This requires the sector to develop knowledge to support long-term system planning in both mitigation and adaptation together.

Climate adaptation initiatives

- Seek to maximise climate change adaptation co-benefits and efficiencies when reducing emissions. For example:
  - Investment to provide for a low-emissions land transport system can also be used to minimise vulnerability to climate-related events by ensuring land-use and transport planning decisions take likely climate impacts into account at the earliest stage.
  - Ensuring that there are a wide range of lower-carbon transport modes available increases resilience to climate-related events.
  - Nature-based solutions are likely to have significant adaptation co-benefits, including by reducing flooding and providing cooling.
- Consider mitigation and adaptation in tandem to reduce the potential for maladaptation, or for adaptation activity to go against emissions reductions. For example:
  - As the climate changes, infrastructure interventions (such as raised roads to reduce the impact of sea-level rise) may be increasingly necessary when maintaining existing levels of service, and this activity creates emissions, both embodied and future enabled.
- Ensure new infrastructure investment avoids locations where near-future climate hazards exist, reducing the risk of stranded assets and/or sunk investment.

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