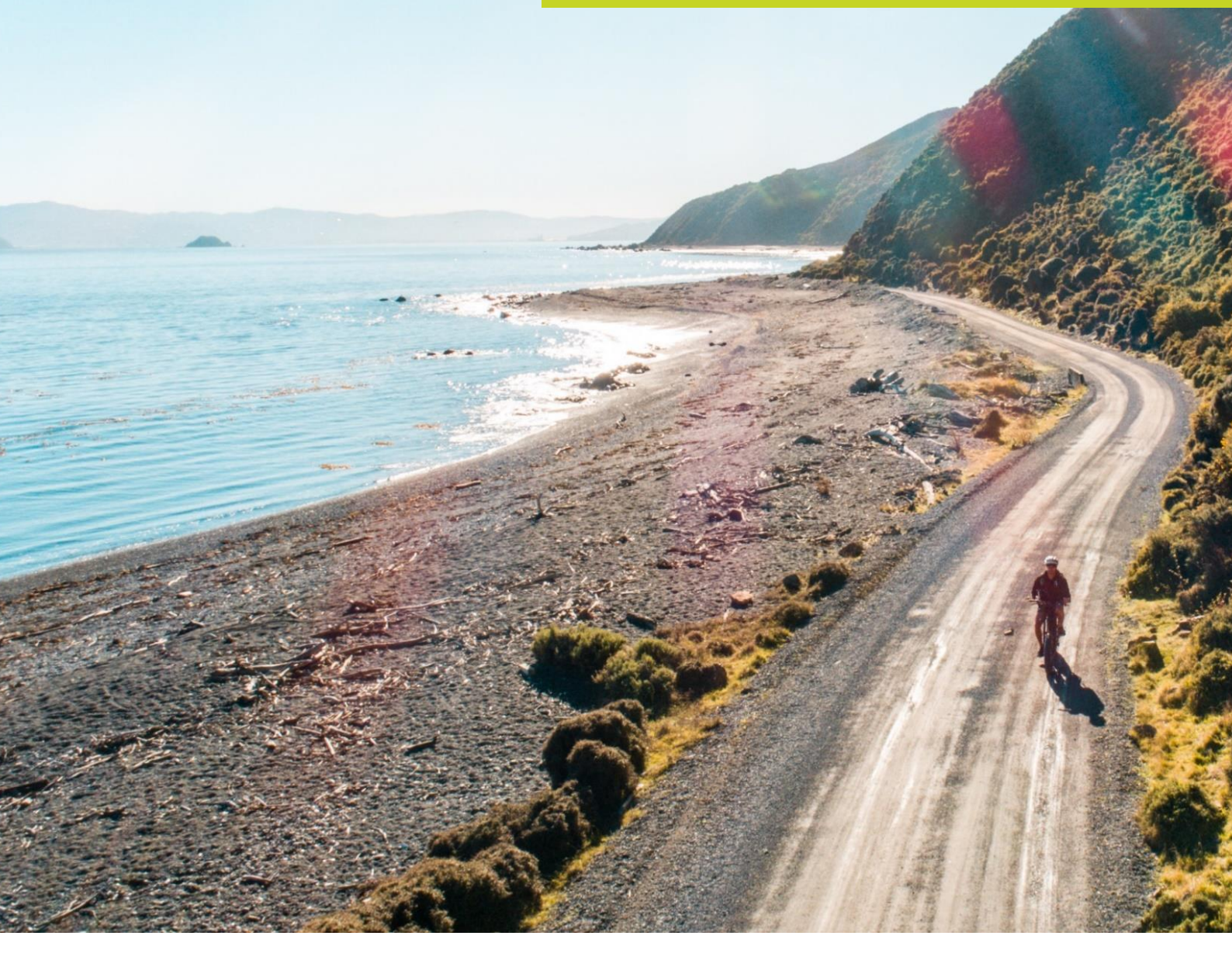
CLIMATE-READY CITY

Lower Hutt will reduce emissions to net zero and accelerate adaptation actions to keep people safe and minimise damage for current and future generations.



IN 2055, OUR CITY HAS REACHED NET ZERO EMISSIONS AND IS PREPARED FOR A CHANGING CLIMATE

Te Awa Kairangi ki Tai Lower Hutt is at the forefront of the climate crisis. As a coastal city built on a floodplain with a major faultline, our exposure to natural hazards is high — and climate change is intensifying these risks. The coastal land around Lower Hutt is also sinking, which is effectively doubling the rate of sea-level rise in parts of the city like Petone, Seaview and Lowry Bay.

While our city has long lived with the threat of flooding and earthquakes, climate change is bringing new challenges. The impacts of climate change touches all aspects of our lives - housing, infrastructure, insurance, transport, health, the economy, and our sense of security. Preparing for these changes, and reducing our contribution to them, is one of the defining challenges of the next 30 years.

Global warming is primarily driven by human activity — the release of greenhouse gases (GHG), into the atmosphere. The science is clear: we need to drastically cut emissions to limit warming.

Reducing these emissions requires bold action across the city – changing the way we move around, shifting to renewable energy, and reducing waste. As outlined in *Smart Infrastructure*, we are developing a connected transport network that makes it easy and safe to bike, walk, scooter, bus or train. We will increase local solar and other renewable energy sources, and drive community and business opportunities that reduce emissions, avoid and minimise waste.

At the same time, we will accelerate adaptation efforts – including dynamic adaptive planning, restricting development in areas of high risk, and taking action to reduce the risk of flooding. We will work with communities to plan for hard decisions such as retreat over the long term. We will apply best practice stormwater management, using both nature-based and hard infrastructure solutions, and will strengthen community preparedness, so that we can all get through natural disasters and recover quickly.

This chapter highlights initiatives that will help realise our vision for Te Awa Kairangi ki Tai Lower Hutt by 2055. It concludes with “What You Can Do,” providing practical ways you can support and contribute locally to building Tō Tātou Tāone 2055 – Our City 2055.

INDICATORS

LOWER HUTT CITY WILL TRACK PROGRESS OF THE FOLLOWING INDICATORS:

INDICATOR	LATEST DATA	TARGET
GROSS GREENHOUSE GAS EMISSIONS	514,662 tCO2e 2024	**Net zero by 2050**

BACKGROUND

If the world does not rapidly reduce greenhouse gas emissions, we will lock in a temperature rise of 1.5°C, and are likely to hit 2°C. Global greenhouse gas (GHG) emissions continue to rise despite the Paris Agreement and national reduction pledges.

New Zealand has set a national target of net zero carbon dioxide emissions by 2050, and a reduction in methane emissions of 24-47% by the same year. These targets also apply to Lower Hutt.

Lower Hutt greenhouse gas emissions

In 2021/22, gross emissions in Lower Hutt were 475,520 tCO2e, with net emissions (after carbon sequestration - carbon stored in plants and forests) sitting at 409,435 tCO2e. Total gross emissions increased to 514,662 tCO2e in FY24.[1]

The majority of these emissions come from transport – especially petrol and diesel vehicles on our roads. Stationary energy, including electricity and natural gas used in homes and businesses, is the second-largest contributor. Waste emissions, especially from landfill methane, are also significant.

Escalating climate impacts

We are already experiencing more frequent and more severe weather events. In May 2025, a storm caused widespread surface flooding on Petone Esplanade, slips in Ferry Road, and road closures into Eastbourne and Wainuiomata. These events will increasingly disrupt daily life, damage infrastructure, and place strain on emergency services.

Sea-level rise is a major long-term threat. Global sea levels have already risen by around 20cm since 1900, and the pace is accelerating. In our city, land subsidence is compounding this rise – with Petone (Pito One), Seaview and Lowry Bay sinking by up to 3.8mm per year.

As water tables rise and storm surges intensify, critical infrastructure will be under threat. Roads like Marine Drive and Port Road will become increasingly inundated, and the Waiwhetū aquifer — a vital source of drinking water for the Wellington region - will be at risk of saltwater intrusion. Flooding and groundwater also pose a growing risk to building foundations and pipes.

> The *Wellington Regional Climate Change Impact Assessment Report* projects that 4,690 buildings in Lower Hutt (mainly in Petone) are at risk of being impacted by a major coastal flood event occurring at the end of the century (medium-emissions scenario with 0.9m sea level rise).

The risk of insurance retreat (where properties become too risky to insure) is already emerging in some areas. A Deep South Challenge study found that some Wellington properties could face partial insurance retreat by 2030, and full retreat by 2040.[2] These risks affect not only homes, but commercial and industrial land, particularly in Petone (Pito One) and Seaview.

The effects of climate change are not evenly distributed. Low-income communities, renters, elderly residents, and people with disabilities are likely to be disproportionately affected. Moerā, for example, is a low-socioeconomic suburb at significant risk of flooding. Inequities in housing, insurance, and mobility mean that some residents may face greater hardship and fewer options in the

[1] AECOM, Greater Wellington Region GHG Emissions Inventory 2024

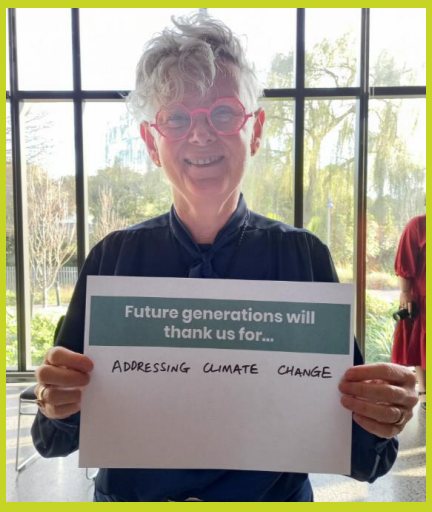
[2] Deep South Challenge, Insurance Retreat

face of climate shocks. It is critical that our response to climate change is equitable.

WHAT WE HEARD FROM THE LOWER HUTT COMMUNITY

There was hope for a future "*community that is conscious of climate change and what can be done to adapt and mitigate*." Suggestions for how to reduce emissions included more local solar power production "*solar panels everywhere*" and more wind power. Many people supported cycleways and improving public transport. Others expressed hope for future "closed loop waste management", effective recycling and composting.

Concerns were raised about the impacts of climate change, particularly sea level rise affecting areas like Petone and Eastbourne, as well as increased flooding, droughts, and water shortages. Building resilience was seen as essential. Proposed measures included adopting 'sponge city' designs to manage water, requiring land and risk assessments for developments, and increasing local food production and renewable energy generation to enhance community resilience.



FUTURE FOCUS

Lower Hutt is already taking steps to reduce emissions and planning and investing in resilience. We need to continue this momentum — and urgently accelerate it.

Reducing emissions will require bold action across the city – improving public and active transport options, shifting to renewable energy, increasing resource recovery and reducing waste, and retrofitting buildings.

We must embed climate risk into infrastructure planning, building materials and design, land use regulation, and emergency preparedness. We will explore nature-based solutions to manage water, invest in community education, and ensure local emergency hubs are resourced and inclusive. And we must actively engage our communities in shaping our response.

SUSTAINABLE DEVELOPMENT GOALS

Our climate-ready city goal supports SDGs for affordable and clean energy and responsible consumption and production. It also works towards inclusive, safe, resilient and sustainable cities, and urgent action to combat climate change and its impacts.

INITIATIVE 24

INCREASE SOLAR GENERATION AND OTHER LOCAL RENEWABLE ENERGY SOURCES

To meet the 2050 zero emissions goal, Te Awa Kairangi ki Tai Lower Hutt needs to radically change the way we power our homes, buildings and transport system. This requires switching to electricity, and moving away from fossil fuels (eg. petrol, diesel and gas). With about 80-85% of our national grid powered by clean sources like hydro and wind, going electric can make a big impact on our city's greenhouse gas emissions. As Lower Hutt decarbonises and electrifies, demand for clean, reliable electricity will grow. Taking action now to electrify and increase solar generation will reduce emissions and lower long-term energy costs.

Increase electrification

Across our city, we will 'go electric' – switching to electricity for our cars, heating and businesses. Many of our residents still rely on fossil fuels like gas for cooking and heating our homes and businesses, and petrol for our cars. Switching to all-electric appliances and EV vehicles will cut emissions and help cut energy costs. HCC will continue to reduce emissions from energy used at facilities – mainly changing natural gas heating to lower carbon options, and aims to switch the vehicle fleet to 100% EVs by 2030 (70% as of December 2024). Our city is also investing in EV charging stations to support the growing demand for electric vehicles.

Install solar systems

Lower Hutt has the opportunity to lead in distributed solar energy—turning rooftops, public buildings and underutilised land into local energy generators. We will encourage the installation of solar photovoltaic (PV) systems across businesses, schools, and homes. Building on examples such as solar in Maungaraki and Naenae schools. Solar projects may be explored for new Council builds and major upgrades.

To boost resilience, we will explore installation of solar and battery backups for critical facilities such as emergency hubs and marae to maintain power during extreme weather events.

Explore other sources of renewable energy

Other opportunities to be explored include wind, biomass, waste-to-energy projects, building on examples such as local business Hot Lime Labs prototype capture system, which converts wood waste biomass into clean CO_2 for commercial greenhouses.

STEPS TO GET THERE	OWNER
Increase electrification	All, HCC
Encourage public and private uptake of solar.	All

INITIATIVE 25

DRIVE BUSINESS AND COMMUNITY OPPORTUNITIES THAT REDUCE EMISSIONS AND MINIMISE WASTE

Te Awa Kairangi ki Tai Lower Hutt will support local businesses, organisations and communities to lead climate action—reducing emissions and waste while creating economic opportunity. We will support innovation, increase uptake of funding and resources, and showcase local success stories. Whether it's electrifying transport fleets, installing solar panels, or designing out waste—we will drive positive change across every part of our city.

Embed sustainable practices

Lower Hutt businesses and organisations will be supported to reduce emissions and adopt low-waste practices. More pathways will be added for reuse and recycling of construction and demolition materials to avoid disposal to landfill. We will encourage use of funding tools such as the Hutt City Council's Low Carbon Acceleration Fund.

Transition to the circular economy and reduce waste to landfill

Lower Hutt is already home to businesses like Pact Group (New Zealand's only PET recycling plant), Nature Pac (compostable packaging), and Macaulay Metals (scrap metal recovery) that support the diversion of resources from landfill. We will explore opportunities to strengthen materials recovery systems, and promote low-waste retail and design. We aim to support households to divert organic food and green organic materials from landfill through kerbside collection.

Grow low-carbon business opportunities

The transition to a low-carbon economy presents new opportunities. We will promote businesses that deliver products and services which reduce emissions—such as solar installers, energy-efficient designers, clean tech startups, and providers of sustainable packaging and transport solutions. Notable examples in Lower Hutt include Noho, which creates furniture from recycled plastics, and Bspkl, a hydrogen startup pioneering clean energy manufacturing.

Showcase success and share learnings

We will highlight local businesses and organisations that are reducing emissions and waste—sharing their stories through case studies, events and awards. By showcasing what is possible, we aim to inspire others and strengthen our city's reputation as a leader in sustainability. We will also foster networks of like-minded organisations to share insights and collaborate on solutions.

Support community climate action

Community groups, schools, social enterprises and marae are key partners in our transition. From community composting to low-waste food systems, we will provide support and recognition for locally led initiatives. We will help scale community climate solutions and encourage new ideas through funding, partnerships and collaborative projects.

STEPS TO GET THERE	OWNER
Support community and business climate initiatives and zero-waste programmes and share local success stories.	HCC
Support business and community transition to EVs, energy efficiency and sustainable practices.	HCC

INITIATIVE 26

ACCELERATE ADAPTATION ACTIONS TO PROTECT OUR COMMUNITY AND FUTURE GENERATIONS FROM THE IMPACTS OF CLIMATE CHANGE

As climate impacts intensify—flooding, sea-level rise, and extreme weather—we must respond with urgency. By taking a proactive approach, we can avoid costly damage, protect lives and livelihoods, and maintain confidence in the future of our city.

Share climate knowledge and solutions

There will be a focus on producing hazard information that is easy to understand and focused on solutions. We will continue to use the latest science and climate projections to map flood zones, sea-level rise and vertical land movement. We will also work to fill critical data gaps, such as the timing of groundwater rise, and impact of saltwater intrusion. Latest information could be conveyed through an online adaptation portal, which may include interactive maps, detailed risk information, data on historical events, and adaptation options.

Accelerate adaptation planning

Lower Hutt may need to prepare a long-term adaptation plan that outlines pathways for managing climate risk across our city—focusing on areas most exposed to sea-level rise and flooding. This may use the Dynamic Adaptive Policy Pathways (DAPP) approach, to identify signals, triggers and actions to adapt over time – including scenario planning for unexpected acceleration of climate change impacts. It will prioritise areas such as Pito One (Petone), Seaview, Moerā, Lowry Bay and Alicetown, where land subsidence and rising seas are compounding risk.

Integrate risk into land use and development

We will ensure land use planning actively manages natural hazard risk. This includes implementing hazard overlays and development controls in our proposed District Plan, which guides where and how we build. In high-hazard areas, new dwellings may require resource consent, or be restricted altogether. Less sensitive activities—like garages or parking areas—may still be allowed. These provisions help avoid future damage and give residents greater certainty over time.

Invest in flood protection infrastructure

We will continue to deliver major flood protection upgrades, including raising stop banks and widening the river channel to accommodate more frequent and intense flooding. Targeted surveillance of ‘at risk’ locations and early warning systems would help residents assess risk and make decisions. We will also invest in complementary infrastructure across the city—such as stormwater upgrades, pump stations and overland flow path management.

Ensure equity and inclusion in adaptation

Some communities are more exposed and have fewer resources to adapt. We will ensure that adaptation planning takes account of equity—engaging with low-income households, older adults, and people with disabilities, who may face higher barriers to action.

STEPS TO GET THERE	OWNER
Accelerate adaptation planning.	HCC, GWRC
Deliver flood risk reduction.	HCC, GWRC

INITIATIVE 27

DEVELOP NATURE-BASED SOLUTIONS ACROSS THE CITY TO MANAGE EXCESS WATER

Te Awa Kairangi ki Tai Lower Hutt will work to reduce the risk and impacts of flooding by restoring natural systems that absorb, store and slow water across our city. By integrating nature-based solutions—such as wetlands, raingardens, swales and permeable surfaces—we can reduce flood damage, improve water quality, support biodiversity, and create attractive public spaces. Nature-based infrastructure works alongside engineered assets to improve urban resilience.

Evaluate nature based options

We will deliver robust, dynamic assessments of nature based options, and consider wider impacts (on the ecosystem, economy, society) to avoid risks of maladaptation and determine whether nature based solutions are the most appropriate option. There will be a focus on developing a regionally consistent approach to nature-based solutions.

Create multi-purpose flood storage

We will explore opportunities to integrate open spaces—such as parks, playing fields and golf courses—to store stormwater during extreme rain events. These spaces can be designed for dual use: dry and functional most of the time, and temporarily holding floodwaters when needed. Examples include Kaitaki Greenslade Reserve in Auckland, where a sports field was reshaped to hold the equivalent of six Olympic swimming pools of floodwater, and wetlands in Christchurch's Ōtākaro Avon River Corridor.

Expand urban green infrastructure

Urban surfaces like concrete and asphalt cause rainwater to run off rapidly—contributing to flooding. By increasing permeable surfaces and installing green infrastructure like raingardens, swales and green roofs, we can reduce runoff and allow water to soak into the ground. We will support Water Sensitive Urban Design (WSUD) principles in public and private developments.

Design infrastructure for climate adaptation

We will seek to incorporate nature-based approaches into major projects, including roading upgrades, community facility design, and stormwater infrastructure. This includes integrating urban green infrastructure into Te Wai Takamori o Te Awa Kairangi. New subdivisions and infill developments will increasingly be required to manage their own stormwater on-site. We will also encourage developers to integrate features that help manage future flood risk.

Support communities to take action

We will work with schools, residents, and local organisations to promote nature-based stormwater management. This will show how small-scale changes—like planting native vegetation, or unblocking overland flow paths—can make a big difference. Initiatives like "Adopt a Drain" will help build community ownership of local drainage systems.

STEPS TO GET THERE	OWNER
Identify and prioritise sites for green infrastructure and flood storage.	HCC, GWRC
Support community-led projects and education on stormwater management.	Wellington Water, HCC, GWRC, Mana Whenua

INITIATIVE 28

STRENGTHEN COMMUNITY AND BUSINESS PREPAREDNESS FOR NATURAL DISASTERS

We will ensure all communities, organisations and businesses are ready to respond to natural disasters and recover quickly. As a city exposed to multiple natural hazards—being prepared is essential.

Foster a culture of preparedness

We will raise awareness and encourage action across schools, businesses, marae, and households—so that everyone understands their risks and knows how to prepare. We will support the development of emergency response plans, household kits, evacuation routes and localised response networks. Public campaigns will highlight simple, high-impact actions—like storing water, learning first aid, and checking insurance coverage.

Recognise and strengthen Māori-led response

Mana whenua and local marae are important partners in building community resilience and emergency response, as demonstrated during the COVID-19 pandemic when Kōkiri Marae provided thousands of food parcels. We will integrate Māori-led responses into citywide emergency management, and work with marae to ensure they are equipped as emergency hubs.

Equip and connect emergency hubs

It is vital that Lower Hutt's emergency hubs—such as marae, schools, and community centres—are resourced and connected. These locations can act as lifelines during emergencies, providing shelter, communication, power and first response. We will work to improve hub resiliency with backup power, emergency kits, communications equipment and clear signage.

Strengthen local volunteers

Community response is often the first and most effective form of help in a disaster. We will expand Lower Hutt's trained volunteer base, ensuring it reflects the diversity of our communities. We will work to grow the number of trained members in the NZ Response Team, and explore partnerships with groups like LANDSAR and Taskforce Kiwi.

Promote business continuity planning

We will promote continuity planning to ensure that businesses can continue operating and supporting their communities after a shock event. Special attention will be paid to lifeline utilities, food suppliers, health providers, and other essential services that support citywide resilience.

Make preparedness accessible and inclusive

We will ensure our approach to preparedness is inclusive—taking into account the needs of people with disabilities, those with limited English, older adults, and low-income households. We will translate resources, and use visual and digital tools (such as mobile apps, VR simulations, and community games).

STEPS TO GET THERE	OWNER
Deliver citywide awareness campaigns for households and workplaces.	HCC
Support and equip local emergency hubs with power, kits and comms and expand trained volunteer networks.	HCC, Marae

INITIATIVE 24: INCREASE SOLAR GENERATION AND OTHER LOCAL RENEWABLE ENERGY SOURCES		
STEPS TO GET THERE	**OWNER**	**STATUS**
Increase electrification.	All, HCC	
Support public and private uptake of solar.	All	
INDICATORS	**LATEST DATA**	**TARGET**
% of total city electricity use from local renewables		Annual increase

INITIATIVE 25: DRIVE BUSINESS AND COMMUNITY OPPORTUNITIES THAT REDUCE EMISSIONS AND MINIMISE WASTE		
STEPS TO GET THERE	**OWNER**	**STATUS**
Support community and business climate initiatives and zero-waste programmes and share local success stories.	HCC	
Support business and community transition to EVs, energy efficiency and sustainable practices.	HCC	
INDICATORS	**LATEST DATA**	**TARGET**
% of vehicles that are electric.		Annual increase

INITIATIVE 26: ACCELERATE ADAPTATION EFFORTS TO PROTECT OUR COMMUNITY AND FUTURE GENERATIONS FROM THE IMPACTS OF CLIMATE CHANGE		
STEPS TO GET THERE	**OWNER**	**STATUS**
Accelerate adaptation planning for high-risk areas.	HCC, GWRC	
Deliver flood risk reduction.	GWRC, HCC	
INDICATORS	**LATEST DATA**	**TARGET**
Number of buildings protected by major flood infrastructure upgrades.	~3,000 homes, 600 businesses	Delivered by 2030

INITIATIVE 27: DEVELOP NATURE-BASED SOLUTIONS ACROSS THE CITY TO MANAGE EXCESS STORM WATER		
STEPS TO GET THERE	**OWNER**	**STATUS**
Evaluate nature-based options, then develop flood storage and green infrastructure.	HCC, GWRC	
Support community-led projects and education on stormwater management.	Wellington Water, HCC, GWRC, Mana Whenua	
INDICATORS	**LATEST DATA**	**TARGET**
Number of new green infrastructure installations per year Or Area of public land with nature-based stormwater treatment		

INITIATIVE 28: STRENGTHEN COMMUNITY AND BUSINESS PREPAREDNESS FOR NATURAL DISASTERS		
STEPS TO GET THERE	**OWNER**	**STATUS**
Deliver citywide awareness campaigns for households and workplaces.	HCC	
Support and equip local emergency hubs with power, kits and comms and expand trained volunteer networks.	HCC, Marae	
INDICATORS	**LATEST DATA**	**TARGET**
Number of trained NZRT volunteers based in Lower Hutt.	25 (2024)	50+ by 2028

WHAT YOU CAN DO

1

USE LESS ENERGY OR MAKE YOUR OWN. Improve insulation, electrify your home. If you're able, install solar panels.

2

SUPPORT SUSTAINABLE BUSINESS. Look for businesses that are reducing waste, using renewable energy, or taking action to reduce emissions.

3

ADOPT A DRAIN. Help reduce flood risk by keeping nearby stormwater drains free of leaves and rubbish.

4

GET READY TO GET THROUGH. Create a household or workplace emergency plan, store water, have a grab-and-go bag. Encourage your whānau to prepare too.