

Preparing for Climate Change

Our atmosphere is made up of oxygen, nitrogen and greenhouse gases such as carbon dioxide and methane. These greenhouse gases blanket the Earth and trap warmth from the sun, which makes life on Earth possible. However, increasing the concentration of these gases in the atmosphere causes the Earth to heat more (global warming) and the climate to change. In addition to increasing global temperatures, there are likely to be more frequent extreme climate events such as floods, storms, cyclones and droughts.

Climate change before the Industrial Revolution can generally be explained by natural causes. It was gradual, enabling plants and animals to adapt or migrate. However, human activities such as industry, agriculture and transportation, have dramatically increased the rate of concentration of greenhouse gases in our atmosphere, leading to more heat retention and an increase in surface temperatures.

What is being done about it?

NZ was one of 195 countries that signed the Paris Agreement in 2016, committing to “*holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C*”. To achieve this, the world must transition towards a low-carbon economy by the second half of this century. If we don’t act and continue as we are, global warming is expected to reach 4.1° - 4.8°C above pre-industrial levels by 2100.

The NZ Government has a range of initiatives to help us move towards a low-emissions economy and reduce the impacts of climate change. This includes the Climate Change Response (Zero Carbon) Amendment Act 2019 which sets NZ’s target net emissions for all greenhouse gases (except methane) to zero by 2050. In setting emissions targets for our district, we have to set targets that are at least as ambitious as the national target. Taking action to cut emissions (mitigation) is necessary to help reduce future global warming. However, we also need to take actions to adapt to the impacts of the climate change that is already happening.

Rotorua Lakes Council has an important role to play in preparing the community for and managing the risks of climate change-related natural hazards. It is our role to assess these risks and how we can best respond to the challenges (and opportunities) they present. Adaptation for climate change is already a priority consideration in the planning and management of our infrastructure.

How can I have my say?

Working with partners/stakeholders we have developed a draft Climate Action Plan for our district. This discusses the risks our district faces from climate change; the opportunities for emissions reduction; and how we can adapt to the changing climate. We would like your feedback on this Plan.

- A. Do you agree with our proposed emissions targets?**
- B. Do you agree with our proposed climate mitigation goals?**
- C. Do you agree with our proposed climate adaptation goals?**

Our proposed targets and goals for climate change mitigation and adaptation are summarised over the page. For a copy of the full Plan including proposed actions towards achieving our goals, go to: rotorualakescouncil.nz/letstalk or visit Council to pick up a hard copy.

Public consultation on this Plan will close on Friday 16 October 2020.

How will climate change affect us in Rotorua?

Changes to our climate could mean:

- ⚙ Higher temperatures
- ⚙ More extreme heavy rainfall and flooding events
- ⚙ Water shortages, reduced water quality and increased risk of wildfires
- ⚙ Longer crop growing season and fewer frosts
- ⚙ Increased risk of invasive pests and weeds
- ⚙ Increase in diseases

What will we do about climate change?

Mitigation

Reducing our emissions could help limit the impact of climate change. The draft Climate Action Plan proposes the following goals for climate mitigation:

Buildings & Energy Systems

- ⚙ Increase renewable energy capacity
- ⚙ Increase building and infrastructure energy efficiency
- ⚙ Transition space and water heating to sustainable energy sources
- ⚙ Upgrade all public lighting to be energy efficient

Transportation & Urban Form

- ⚙ Achieve modal change to active and public transport
- ⚙ Encourage vehicle fuel switch to sustainable energy

Consumption & Waste

- ⚙ Reduce waste to landfill from organic and non-organic sources

Leadership, Advocacy & Economic Opportunity

- ⚙ Develop capacity of Council, Te Arawa, businesses and the community to work together to mitigate climate change

Natural Environment & Rural Economy

- ⚙ Reduce agricultural emissions
- ⚙ Increase exotic and native forestry

Proposed Emissions Targets

In line with the national targets, we are proposing:

- ⚙ A reduction in non-biogenic emissions, to net zero by 2050 (30% by 2030)
- ⚙ A reduction in biogenic methane emissions of 24-47% by 2050 (10% by 2030)

Adaptation

We cannot avoid climate change entirely and will need to prepare for and adapt to climate hazards and risks. We propose the following goals for climate adaptation:

Infrastructure

- ⚙ Identify climate change risks and potential impacts on infrastructure and plan for resilience

- ⚙ Transport Infrastructure Plan identifies climate risks and adaptation measures for a resilient transport system
- ⚙ Safe potable water supply
- ⚙ Ensure resilience of the wastewater management system
- ⚙ Stormwater system is designed and maintained to accommodate climate-adjusted projected flooding
- ⚙ Increase resilience of power supply to interruption

People & Communities

- ⚙ Increase resilience of public space to extreme high temperatures and rainfall
- ⚙ Build local resilience to increased price of food and other items related to increased price of carbon
- ⚙ Increase sustainability of housing to support health and wellbeing of residents through changes in climate
- ⚙ Increase future working population's ability to respond to a changing employment environment

Natural Environment

- ⚙ Optimise rural land use in a changing climate
- ⚙ Support the maintenance and protection of native species, including a healthy conservation estate
- ⚙ Urban natural environments support community wellbeing and resilience

Governance, Leadership & Advocacy

- ⚙ Budgeting and investment supports priorities for community adaptation to climate change
- ⚙ District planning and processes support implementation of adaptation initiatives
- ⚙ Increased community safety, preparedness and resilience to severe weather events
- ⚙ Communities are educated and informed and contribute to climate change adaptation actions

Economy

- ⚙ Opportunities for new low-carbon local businesses are identified