

Waste and fluorinated gases sector

The most effective way to reduce waste emissions further is additional action to prevent disposal to landfill in the first place.

This chapter looks at greenhouse gas emissions in three areas: organic waste, landfill gas (LFG) capture and fluorinated gases (f-gases). In Aotearoa New Zealand waste emissions come mostly from the disposal of organic waste to landfills. Smaller quantities are from wastewater treatment, the incineration and burning of solid waste, and treatments such as composting. Waste emissions are mostly methane, with the remainder being carbon dioxide and nitrous oxide.

Highly potent f-gases are used in refrigeration, air conditioning and heating systems. Existing technology and practices to limit leaks and the release of gases during disposal are effective at reducing these emissions.

Snapshot of emissions

Total waste sector emissions	Percentage of projected net reductions (2026–2030)
3.0 MtCO ₂ e (2023)	Waste: 4.2%
3.0 MtCO ₂ e (2024)	F-gases: 3.1%
Total f-gas sector emissions	Change in emissions between 2023 and 2024
1.2 MtCO ₂ e (2023)	–1.5% from managed landfills
1.1 MtCO ₂ e (2024)	+0.1% from unmanaged landfills
Percentage of country's gross emissions	–5.1% in f-gases
Waste: 4.0%	
F-gases: 1.5%	

Policy scorecard

Scorecards assess the adequacy of current policy and plans for reducing emissions in each sector, and determine if the risk has increased, decreased or remained the same as in our 2025 assessment.

– No change in risk since 2025 ↑ Increased risk since 2025

Policy area	Overall risk assessment	
	EB2	EB3
Organic waste	–	–
Landfill gas capture	–	–
F-gases	↑	–

No significant risks Moderate risks Significant risks

Key findings



Changes in emissions

- Emissions from waste were virtually unchanged between 2023 and 2024, reducing by 0.014 MtCO₂e. While methane emissions from managed landfills decreased by 1.5% or 0.021 MtCO₂e since 2023, emissions from unmanaged disposal sites increased by 0.1% or 0.0008 MtCO₂e.
- Overall, emissions from f-gases reduced by 5.1% or 0.0613 MtCO₂e between 2023 and 2024.



Policy changes in the last year

- Proposals for new legislation include broadening how waste levy funds can be spent by territorial authorities. This has the potential to undermine waste minimisation activities undertaken by councils.
- The Ōtautahi Christchurch Organics Processing Facility received resource consent and is scheduled to start operating from early 2027. A new steam plasma arc refrigerant destruction facility opened in Kawerau in 2026, enabling the onshore destruction of synthetic refrigerant gases.



Risks to achieving planned emissions reductions

- The second emissions reduction plan primarily relies on investing in resource recovery through the Waste Minimisation Fund to achieve organic waste reduction. Projections indicate this approach will not achieve the systems change necessary for sustained reductions.
- There is now a timeline risk for the implementation of regulated product stewardship of refrigerants to achieve the projected emissions reductions in 2027. The timeline for

improved training and qualification requirements for refrigerant handlers as part of the scheme is also uncertain.



Areas for attention

- Measures to address barriers to organic waste diversion and support circular economy practices are needed – pricing through the New Zealand Emissions Trading Scheme (NZ ETS) alone is unlikely to be sufficient.
- There is no transparent policy commitment or pathway to achieve the anticipated LFG capture expansion and efficiency gains – it is unclear if projections are achievable.
- There is a lack of technician training and education to support the safe use of natural refrigerants. This is needed for the transition away from high global warming potential (GWP) f-gases.



Opportunities for further reductions

- Limiting the use of reclaimed high-GWP synthetic refrigerants where low-GWP alternatives exist.
- Expanding LFG capture systems to non-municipal landfills could further reduce emissions by nearly 1 MtCO₂e in the third emissions budget. The majority of these reductions would be Class 2 landfills.
- Improved organic waste management practices using existing policy measures can reduce emissions by up to 0.6 MtCO₂e in second emissions budget and 1.3 MtCO₂e in the third emissions budget.

Overall findings of the 2026 report

- Greenhouse gas emissions are gradually falling, but the pace needs to more than double.
- The risks to meeting the country's emissions goals have increased. If additional action does not occur in the next one to two years, it will no longer be feasible to meet the 2030 biogenic methane target or the third emissions budget.
- Climate disruption and economic impacts in Aotearoa New Zealand are growing, and greater and more durable emissions reductions are needed to manage these risks.
- Acting earlier to reduce emissions can strengthen resilience, reduce exposure to shocks, and lower costs for households, businesses and the country.

About emissions reduction monitoring

Each year, He Pou a Rangi Climate Change Commission (the Commission) independently monitors Aotearoa New Zealand's progress on reducing greenhouse gas emissions. These reports form a picture over time, showing how the country is tracking towards its climate change goals.

This is our third annual report. It tracks emissions reductions overall, as well as the government's progress towards meeting the second and third emissions budgets and the 2050 target.

New Zealand's Greenhouse Gas Inventory provides emissions data up until the end of 2024; Stats NZ estimates and Government projections supplement this to provide a more up-to-date picture.

Want to read more?

There are also summaries of the agriculture; transport; energy, industry and buildings; and forestry sectors, as well as on progress, risks and further opportunities centred on iwi/Māori.

These summaries and the full report – along with the executive summary and a one-page summary of our findings – are on the Commission's website: climatecommission.govt.nz/ERM-2026.