

The New Zealand government has decided to use an emissions trading scheme for greenhouse gas emissions as part of its response to climate change. Emissions trading will help reduce emissions, encourage and support global action on climate change, and help put New Zealand on a path to sustainability. This factsheet is an introduction to how emissions trading is likely to affect the waste sector.

## Emissions trading and waste

Factsheet 10



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### Waste emissions

The greenhouse gases methane and nitrous oxide are emitted into the atmosphere from waste treatment and disposal. These emissions come from solid waste, wastewater facilities, and incineration. The greenhouse gas carbon dioxide is also emitted from some waste activities, but it is not included in emissions trading (except for emissions from waste incineration).

The waste sector was responsible for 2.4 per cent of New Zealand's greenhouse gas emissions in 2005. It is the only sector that has reduced its greenhouse gas emissions below 1990 levels, by 26 per cent. It has achieved this by improving landfill management systems, by installing landfill gas recovery technologies, as well as by recycling and composting more.

### What activities will the emissions trading scheme cover in this sector?

The government proposes that the emissions trading scheme covers only methane emissions from solid waste disposal. Methane emissions occur as a result of the bacterial breakdown of organic matter contained in landfill waste. The amount of methane produced depends mostly on waste disposal practices, moisture content, temperature, and composition of the waste.

Wastewater handling and treatment plants emit methane and nitrous oxide, and were responsible for 20 per cent of emissions from the waste sector in 2005. This represents 0.48 per cent of all New Zealand's greenhouse gas emissions. Emissions of these gases are difficult to measure precisely at an individual site. There are a great number of wastewater treatment facilities in this country, which include septic tanks.

There are no solid waste incinerators currently operating in New Zealand that emit significant volumes of greenhouse gases.



Any inclusion of wastewater treatment facilities and solid waste incinerators in an emissions trading scheme would mean administration and compliance costs that would likely outweigh the scheme's benefits.

Therefore, the government proposes to exclude greenhouse gas emissions from wastewater treatment and the incineration of solid waste from the emissions trading scheme. This may be revisited if a municipal solid waste incinerator comes into operation in the future.

Carbon dioxide emissions from solid waste disposal will not be covered by the scheme. This is consistent with the Kyoto Protocol.

The government will not give any free emission units to the waste sector, because the costs imposed by the scheme are expected to be passed on to consumers.

### What are the priority issues for discussion?

The government proposes to include methane emissions from solid waste disposal in the emissions trading scheme from 1 January 2013. Landfill operators would surrender emission units based on a calculation of emissions associated with the volume of waste at the time of disposal at a landfill. The methodology to calculate emissions is expected to be resolved in partnership with the waste sector before the inclusion date.

This timeframe recognises that the Waste Minimisation (Solids) Bill is being considered by a parliamentary select committee. The bill sets up a funding system to support future solid waste minimisation and management activities at local and national levels. One possible funding mechanism is a national levy on waste volumes disposed at landfills.

Such a levy will not directly address greenhouse gas emissions. Yet the government recognises that, if implemented, a national waste levy would increase the cost of waste disposal. This cost increase may encourage additional diversion of waste to landfill and provide revenue for organic waste management initiatives, which will in turn result in further reductions in emissions.

The proposed start date for including methane emissions from solid waste disposal could be revisited if the Waste Minimisation (Solids) Bill is not enacted, or if the resultant legislation does not apply a financial cost to solid waste disposal.

### Potential impacts of an emissions trading scheme for the waste sector

The cost of emission units is expected to be passed on to customers of landfills (the people and organisations depositing waste) through increased prices for waste disposal. If the price of carbon is \$15 per tonne, the cost of disposal will increase by \$15 per tonne of waste (this assumes no methane is collected or destroyed by the landfill, and the waste has an average quantity of organic material in it).

### Other government climate change initiatives relevant to the waste sector

The national environmental standard to control greenhouse gas emissions from landfills directly addresses methane emissions from solid waste disposal. This standard requires landfills with capacities greater than one million tonnes to install and operate landfill gas collection systems.



A national waste levy or other financial charge on the disposal of waste under the Waste Minimisation (Solids) Bill is likely to influence greenhouse gas emissions from landfills, if enacted. As noted above, the levy could indirectly reduce greenhouse gas emissions.

Also, the New Zealand Waste Strategy contains a range of targets, some of which relate specifically to organic waste and general waste disposal. Initiatives introduced in response to these targets are likely to influence greenhouse gas emissions from the waste sector.

### Where to go for more information

For more information on the government's climate change work, including 'The Framework for a New Zealand Emissions Trading Scheme' and a series of emissions trading factsheets, visit [www.climatechange.govt.nz](http://www.climatechange.govt.nz)

Visit the Ministry for the Environment website [www.mfe.govt.nz](http://www.mfe.govt.nz) for further information on the government's programmes on solid waste and wastewater treatment.

Your local council will be able to give you information on waste treatment services and policies in your area.