



Inquiry into Annual and Financial Reports 2023–2024

Answer to question on notice

Asked by: Ms Jo Clay MLA

Addressed to: Minister for Climate Change, Environment, Energy and Water

Reference: Climate Change

Hearing: 14 February 2025

In relation to: Climate Emissions From Waste

Question received: 20 February 2025

Answer Due: 28 February 2025

The ACT Greenhouse Gas inventory 2023-24 p 5 says 'waste emissions increased by 27%'.

Page 7 of the 2023-24 inventory says that emissions from waste including wastewater were 107.9 kt CO₂e.

Page 14 of the 2023-24 report says that 'in 2023-24, emissions from landfill were 102 kt CO₂e, having increased by 29% compared to last year. Emissions from wastewater have increased by 5%, rising to 5.8 kt CO₂e, compared to 5.5 kt CO₂e in 2022-23.'

On page 14 and 15 an explanation is given about how the calculation methodology and flaring assumptions have changed. Historic emissions from waste to landfill are given as 79.4 kt CO₂e for 2022-23 and as 102.1kt CO₂e for 2023-24. This is different from the figure given in the 2022-23 ACT Greenhouse Gas inventory p 15 gives emission for waste to landfill as 79.4kt CO₂e.

- (1) What were emissions from waste to landfill in 2022-23?
- (2) What were emissions from waste to landfill in 2023-24?
- (3) If emissions from waste to landfill are increasing, why?
- (4) Is organic waste to landfill increasing?
- (5) Are emissions from organic waste to landfill increasing?
- (6) What is the ACT Government doing to decrease emissions from waste to landfill?
- (7) Does the ACT Government expect emissions from waste to landfill to be a risk to meeting our legislated emissions reduction targets?
- (8) Did the ACT Government model the impact on emissions when it decided to delay the new FOGO household service from 2023 to 2026?

(9) Do any previous Greenhouse Gas Inventories need to be corrected or annotated?

Minister for Climate Change, Environment, Energy and Water, Suzanne Orr MLA: The answer to the Member's question is as follows:

(1) As per 2023-24 greenhouse gas inventory (GGI), emissions from waste to landfill in 2022-23 were 79.4 kt CO₂-e. This is different from the figure in the 2022-23 GGI Report (174.7 kt CO₂-e).

Waste emissions were historically restated in the 2023-24 GGI due to:

- a) updates to actual waste mix proportions;
- b) updates to the National Greenhouse and Energy Reporting (NGER) Solid Waste Calculator; and
- c) error correction.

(2) Emissions from waste to landfill in 2023-24 were 102.1 kt CO₂-e.

(3) Emissions from waste to landfill increased by 29% from 2022-23 to 2023-24 despite waste volumes decreasing by 15% and methane recovery increasing by 29%.

The increase is attributed mainly to the calculation method.

The NGER solid waste calculator is used to estimate waste methane emissions from ACT landfill based either on:

- i) the waste composition and volumes deposited (A); or
- ii) on the quantity of methane captured (B).

The NGER solid waste calculator estimates emissions based on quantity of methane captured (B) when methane capture exceeds 75% of the theoretical methane generation (A). The ACT methane capture rate has exceeded this 75% theoretical limit since 2020-21, so calculations have been revised in accordance with the method. While it looks as though emissions increase as methane capture increases, this is not necessarily correct. Rather, it reflects the difficulty with predicting methane from waste. As more accurate data is used, our understanding of actual emissions improves.

(4) Organic waste to landfill is decreasing, i.e., from 144 kt in 2022-23 to 123 kt in 2023-24.

(5) Landfill emissions are generated from the decomposition of organic waste. Landfill emissions are increasing as discussed in response to question 3.

(6) The ACT Government are engaged in actively reducing emissions from waste through the implementation of a pilot project for the collection of FOGO from households, landfill gas capture and energy generation, and through the Circular Economy legislation. NoWaste are also targeting education strategies to minimise waste generation and maximise recycling and reuse.

Waste strategies and policies include:

- [ACT Circular Economy Strategy and Action Plan 2023-2030](#)- Both the Food and organic action plans and the Built environment action plans within this Strategy has a focus on reducing emissions.
- [Circular Economy Act 2023](#) - which was passed in 2023 (replacing the *Plastic Reduction Act 2021*), continues the phase out of single use plastics and sets a framework for regulations to require businesses to have a separate collection for co-mingled recycling and organic waste collection, as well as a food waste reduction plan.
- [ACT Waste Management Strategy 2011-2025](#) - The strategy sets a target of increasing the rate of resource recovery to over 90% by 2025, with no recoverable waste sent to landfill.

(7) Methane leakage from organic waste in landfill is expected to contribute to residual emissions in 2045. This is due to factors such as a growing population and the continuing methane emissions from organic waste deposited over previous decades. The roll out of Food Organics Garden Organics (FOGO) collection across the ACT and additional methane capture would have a material impact on waste emissions.

(8) The timeline for the FOGO processing facility was revised due to changes to government priorities to complete a new recycling facility, following the Boxing Day 2022 fire that destroyed Canberra's recycling plant in Hume. The impact on emissions was not considered as a part of the decision.

Planning and environmental approvals for a large-scale FOGO facility are progressing. The ACT Government will be approaching the market through a two-stage procurement process in early 2025. These timeframes are subject to environmental and planning approvals along with successful procurement processes.

(9) Each Greenhouse Gas Inventory (GGI) seeks to use the most accurate methods and up to date data sources. A GGI can be considered the best estimate of ACT emissions at a point in time, and they are not retrospectively corrected or annotated.

Wherever there are improvements or changes to data sources, measurement methods, or when errors are identified, they are acknowledged in the GGI. For example, in the 2023-24 GGI, previous emission figures have been restated for different sectors, including waste. Appendix 3 of the ACT Greenhouse Gas Inventory Report for 2023-24 provides details of corrections.

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Approved for circulation to the Standing Committee on Environment, Planning, Transport and City Services

Signature:

Date:

27/02/25

By the Minister for Climate Change, Environment, Energy and Water, Suzanne Orr MLA