



City of Unley Corporate Greenhouse Gas Inventory FY23-24

18 March 2025

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Kaurna Acknowledgement

We acknowledge that the City of Unley is part of the traditional lands of the Kaurna people and we respect their spiritual connection with their country.

We also acknowledge the Kaurna people as the traditional custodians of the Adelaide region and that their cultural and heritage beliefs are still as important to the living Kaurna people today.

1 Executive summary

1.1 Background

The City of Unley has a commitment to achieving carbon neutrality for operations by December 2030 (Climate & Energy Plan, February 2023). This report describes the greenhouse gas emission inventory for the 2023-2024 financial year.

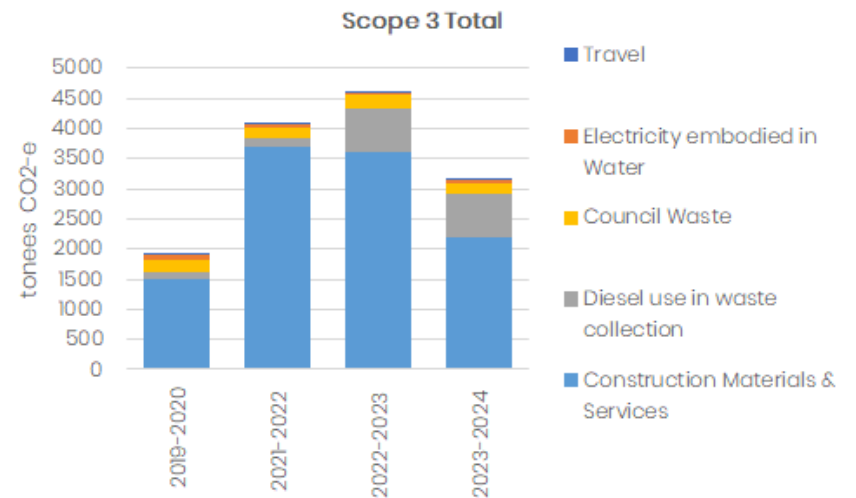
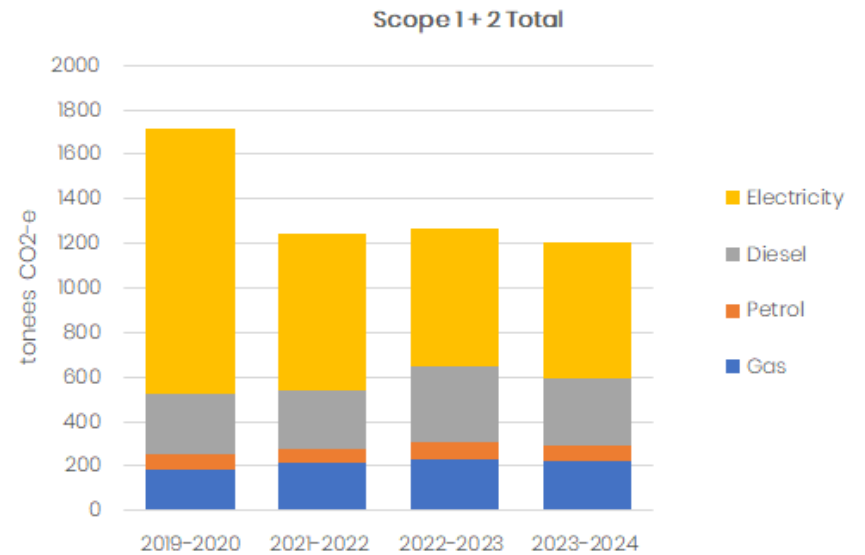
Inventories categorise emissions sources into three scopes:

- **Scope 1** or “direct emissions” are those released directly by Council Operations such as the combustion of petrol, diesel and gas.
- **Scope 2** refers to the emissions embodied in the electricity consumed by Council Operations.
- **Scope 3** refers to other “indirect” greenhouse gas emissions that are generated in the wider economy as a consequence of Council’s operations.

The Scope 1 and 2 emissions from Council Operations are based on the quantities of fuels and electricity used. These are well documented and accurately measured.

Scope 3 on the other hand is largely based on applying general “emissions factors” to categories of expenditure.

The FY2023-2024 inventory total represents a 20% increase in estimated overall emissions compared to the base year FY2019-2020 but is a 26% decrease compared to FY2022-2023. This is largely attributed to a decrease in spending in the construction materials and services category. Further detail is provided in **Table 1** and an explanation for all major changes is provided at Section 4.1.



2 Emissions Reduction Actions during FY2023–2024

City of Unley completed the following emissions reduction actions in FY2023–2024 (Climate & Energy Plan – Year 4):

- Commenced purchase of light fleet Electric Vehicles – Council's first electrical vehicle for Regulatory Services team.
- Installation of two EV chargers at Civic Centre to support Council's fleet transition to electric vehicles.
- Investigated establishment of Public EV charging infrastructure on Council owned property. Council considered responses to a tender for the provision of public EV charging infrastructure and decided not to pursue further.
- Commenced a solar and battery installation project at Goodwood Community Centre (due for completion FY24–25).
- Continued with building efficiency upgrades as assets were replaced.
- Partnered with 10 South Australian councils for the Low Carbon Roads and Footpaths for Local Government Project. Led by the City of Charles Sturt, ARUP has been engaged to produce a decision support tool to assist councils to reduce their Scope 3 emissions from their infrastructure projects. The project was part funded through a Local Government Research and Development Scheme grant and is due for completion in FY24–25.
- Partnered with Library team to purchase four thermal cameras for inclusion in the library collection to assist residents of Unley to improve energy efficiency in their homes.
- Delivered 14 Sustainable Homes Expert Webinars in partnership with Renew and Resilient East to help reduce carbon emissions resulting from transport and building and operating a home.
- Reported Council's annual greenhouse gas emission data to CDP (Climate Disclosure Project) and Global Covenant of Mayors for Climate & Energy to meet membership requirements.
- Investigated a Power Purchase Agreement for the purchase of 100% renewable energy for large and key smaller sites in partnership with Eastern Adelaide Renewable Power Purchasing Agreement.
- Purchased an additional e-bike for staff use to travel to meetings and site visits, replacing car use.

3 Data Sources

City of Unley staff provided data from several sources for this report including:

- Billing data entered into Trellis for electricity and water use,
- Financial data and Audit committee reports,
- Bespoke reporting prepared by staff
- Data from East Waste for waste collection (fuel, kilometres travelled and truck hours)

4 Greenhouse Gas Emissions Inventory FY2023-2024

Scope	Sub Category	Base Year 2019-2020 (t/CO ₂ e)	2021-2022 (t/CO ₂ e)	2022-2023 (t/CO ₂ e)	2023-2024 (t/CO ₂ e)	% Change to base year	% Change to FY22-23
Scope 1	Gas	183	213	230	220	20%	-4%
	Petrol	73	63	78	70	-5%	-11%
	Diesel	270	267	337	301	11%	-11%
Scope 2	Electricity	1193	697	623	613	-49%	-2%
Scope 1 + 2 Total		1,719	1,240	1,267	1,204	-30%	-5%
Scope 3	Travel	4	1	0.3	1.7	-58%	398%
	Electricity embodied in Water	85	38	26	61	-28%	138%
	Diesel use in waste collection	128	139	721	721	463%	0%
	Council Waste	180	178	235	176	-2%	-25%
	Construction Materials & Services	1500	3703	3614	2184	46%	-40%
	Scope 3 Total		1,897	4,059	4,596	3,144	66%
Total Emissions, Scope 1, 2 & 3		3,616	5,299	5,863	4,348	20%	-26%

Table 1: Total inventory for the City of Unley for FY2023-2024 compared to the base year (FY2019-2021), FY2021-2022, and FY2022-2023.

4.1 Explanation of Significant Changes

Category	FY22-23 tCO ₂ -	FY 23-24 tCO ₂ -e	Change	Comments
Petrol	78	70	-11%	The 11% decrease is due to a decrease in fuel use. There has been no change to the emissions factors.
Diesel	337	301	-11%	The 11% decrease is due to a decrease in fuel use. There has been no change to the emissions factors.
Travel	0.3	1.7	+398%	This increase is due to more flights with longer distances being made in FY23-24 compared to FY22-23.
Electricity emissions embodied in Water	26	61	+138%	The increase in reported emissions is due to water consumption increasing by 59% in FY23-24. There has been no change to the emissions factor for electricity but the electricity intensity (kWh/kL) of SA Water increased due to more reliance on pumping from the River Murray (and less on surface water inflows to reservoirs).
Council Waste	235	176	-25%	Council Waste emissions are based on data collected from a waste audit conducted by Council staff. The day the audit is conducted can significantly impact on the estimate of waste Council produces.
Construction Materials & Services	3,614	2,184	-40%	Emissions estimates for this category are based on expenditure in generalised categories. The reduction from FY23 to FY24 reflect reduced expenditure.

Note: The scope 3 inventory reports on the focus areas for Scope 3 reduction identified in Council's Climate and Energy Plan. It does not currently include all categories required to comply with the Australian Government's Climate Active approach to Carbon Neutral Certification for Organisations,.

Increase in estimated overall emissions for FY2023-2024 compared to the baseline year FY2019-2020

The Climate and Energy Plan's Technical Report used estimates to establish Scope 3 emissions and develop an emissions inventory for the Baseline year in 2019-20. The increase in overall emissions is due to the refinement of emissions data collection for Scope 3 emissions so they have more specificity and accuracy each subsequent year. The Climate and Energy Plan's Technical Report acknowledged that a high degree of uncertainty existed in the scope 3 estimates, and as a result the Climate & Energy Plan included an Action to improve and expand the carbon management system to track Scope 3 emissions. Increases in Scope 3 emissions are not necessarily due to changes in the way we have been undertaking projects, instead they can be due to improvements in understanding and quantifying emission sources. The significant jump in Scope 3 emissions is a reflection of this and is likely to fluctuate over the next few years as we deliver our Data Improvement Plan and improve data collection and more accurate quantification of emissions. For example, the construction emissions in 2019-20 were an estimate based on an average amount of refurbished infrastructure and subsequent emissions inventories have been calculated using actual expenditure and emissions factors. A full explanation can be found in the [2021/22 Corporate Greenhouse Gas Inventory](#).

4.2 Next Steps

The following activities are scheduled to be delivered in Year 4 (FY2024-2025) of the Climate & Energy Plan (2023):

- Complete the solar and battery installation at Goodwood Community Centre.
- Complete the Low Carbon Roads and Footpaths for Local Government Project.
- 30kW Solar installation at Depot - deferred from FY 2023-24 due to SAPN requirements.
- Upgrade Unley Swimming Centre solar panel system.
- Upgrade LED Lighting at Civic Centre and sensor automated system.
- Investigate carbon accounting software to better understand and reduce Scope 3 emissions.
- Install and commission solar monitoring hardware and software across facilities to improve energy monitoring and efficiency.
- Continue to purchase electric vehicles as replacements are due.
- Launch and delivery of first two bulk buys engagements for the City of Unley Community Renewables Program.
- Negotiate a Power Purchase Agreement for renewable electricity in partnership with the Cities of Burnside, Campbelltown, Norwood Payneham & St Peters, Prospect, Tea Tree Gully, and Walkerville.