

8. Environment

8.1. Total net greenhouse gas emissions per 1,000 properties – E12

The total net greenhouse gas emissions per 1,000 properties indicator (E12) reports the contribution of a utility's operations to greenhouse gas emissions (t CO₂ equivalent/1,000 properties). Utilities are required to update their calculations annually, and to refer to the National Greenhouse Accounts (NGA) Factors which are issued by the Commonwealth Department of Climate Change, Energy, the Environment and Water. Greenhouse gas emissions are reported in net terms – any quantity of carbon sequestered through activities such as the purchase of carbon offsets is deducted.

The NGA outlines 3 distinct types of emissions factors that may need to be calculated to estimate the full greenhouse impact of an organisation's activities:

- direct emission factors (Scope 1), which calculate the quantity of carbon dioxide equivalent (CO₂ equivalent) emitted per unit of activity at the point of emission release
- indirect emission factors (Scope 2), which calculate the greenhouse impact of purchasing and consuming electricity (that is, the impact of burning fuels – coal or gas – at the power station)
- various emission factors (Scope 3), including the impact of various activities – disposal of waste, employee business travel and the transportation of products.

Comparing different utilities' net greenhouse gas emissions is a difficult exercise and should be undertaken with caution due to the number of variables affecting emissions, including:

- sources of water
- gravity versus pumped networks
- geographical conditions (influencing the need for pumping)
- the number of large-volume customers
- the extent of industry within the customer base
- the prevailing greenhouse policy in the jurisdiction
- the method of calculation.

Total net greenhouse gas emissions data for 2023–24 is presented in Table A14, Appendix A.

8.1.1. Key findings

Table 8.1 shows a summary of the total net greenhouse gas emissions by utility size group.

The median total net greenhouse gas emissions decreased by 2% on the national scale, continuing the declining trend observed in previous years. Goulburn Mulwaree Council (New South Wales) in the Small size group reported the highest emissions of 850 t CO₂ equivalent/1,000 properties yet representing a slight decrease of 0.9% from the previous year. Logan City Council in Queensland reported the lowest emissions of 0 t CO₂ equivalent/1,000 properties, as a result of the purchased accredited carbon credits offsetting emissions for 2023–24.

Table 8.1 Overview of results: Total net greenhouse gas emissions per 1,000 properties (t CO₂ equivalent/1,000 properties)

Utility group	Range		No. utilities with increase/decrease from 2022–23		Median		Change in median from 2022–23 (%)
	High	Low	Increase	Decrease	2022–23	2023–24	
Major	503	0	5	8	166	156	-6
	Central Coast	Logan					
Large	465	157	4	8	337	309	-8
	Goulburn Valley Water	Redland City					
Medium	702	174	8	8	329	374	14
	MidCoast Council	Queanbeyan					
Small	850	71	10	11	386	384	-1
	Goulburn Mulwaree	Bathurst					
All size groups (national)	850	0	27	35	329	322	-2
	Goulburn Mulwaree	Logan					

Note: The median total net greenhouse gas emissions for each year is calculated using data from all utilities supplying both water and wastewater services reporting data for E12 for that year.

8.1.2. Results and analysis – Major utility group

The Major utility group reported a 6% decrease in the median net greenhouse gas emissions from 2022–23 to 2023–24. Yarra Valley Water Corporation (Victoria) had the highest percentage decrease of 34.8%. Similar to last year, Central Coast Council (New South Wales) was the highest total net greenhouse gas emitter with 503 t CO₂ equivalent per 1,000 properties, and Logan City Council (Queensland) was the lowest with 0 t CO₂. The City of Gold Coast (Queensland) had the highest increase in the median net greenhouse gas emissions, rising by 48.6% from 2022–23, bringing its emissions to 298 t CO₂ equivalent per 1,000 properties in 2023–24.