

Council Greenhouse Gas Emissions Report 2017-18

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This report covers greenhouse gas emissions from Council operations. It has been prepared with reference to the GHG Protocol and the National Carbon Offset Standard for Organisations. Calculations have been internally peer reviewed. The greenhouse gases included are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro-fluorocarbons (HFCs) and perfluorocarbons (PFCs), nitrogen fluoride (NF₃) and sulphur hexafluoride (SF₆) sources.

Emission reduction actions

Council began switching to renewable energy in 2011. Council's Revolving Energy Fund generates ongoing funding for projects that save energy or reduce energy costs. Savings are invested back into new projects. Nine projects have now been completed through the Revolving Energy Fund.

Council has installed 239kW of solar PV systems on buildings to date. In 2018, a 25kW system was installed on the Moss Vale Depot in 2018.

Street lighting is a significant contribution to Council's greenhouse gas account. In 2017-18, Council commenced a project to upgrade a portion of street lights to efficient LED fixtures. In stage one of the project 1777 lights were replaced, with a further 324 to be replaced in stage two. The stage one project are estimated to reduce greenhouse gas emissions by 524 tCO₂-e (tonnes of carbon dioxide equivalent) each year.

Other ongoing improvements include replacement of fluorescent lights with efficient LEDs as part of our routine building maintenance program.

Council is developing an Energy Management Strategy and Action Plan to prioritise progress in energy management. Council has also completed a climate change risk assessment for Council operations and tracks ongoing work identified in the climate change adaptation strategy.

While Council continues to take actions to reduce emissions, increases in emission in some areas may also occur over time as services are increased and operational requirements change. Variations in weather from year to year can also

result in fluctuations of energy consumption. For example, the dry conditions in 2017-18 resulted in higher water pumping requirements.

Emissions summary

For the period 2017-18, Council's greenhouse gas emissions total was 21,114tCO₂-e. Electricity, fuel and street lighting were the highest sources of greenhouse gas emissions as seen in Figure 1. Emissions attributable to providing water and sewer (electricity and fugitive emissions) account for 69 percent of the total emissions. Table 2 provides a detailed breakdown of sources.

Figure 1. 2017/18 Emission sources

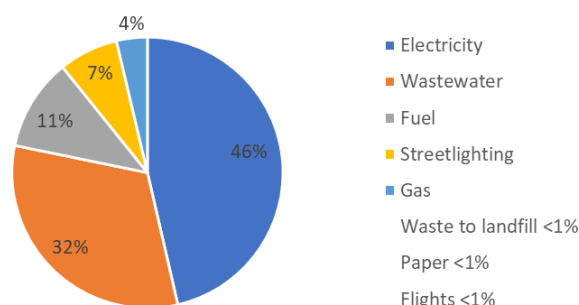


Table 1. Greenhouse gas emissions over time (tCO₂-e)

Scope	2015-16	2016-17	2017-18
Emissions excluding wastewater			
Scope 1	2,810	2,771	2,834
Scope 2	9,039	8,705	8,518
Scope 3	3,486	3,451	3,077
Sub Total	15,334	14,927	14,429
Waste water fugitive			
Scope 1	7,761	10,033	6,685
Total	23,095	24,960	21,114



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Breakdowns of sources

Table 2. 2017-18 Greenhouse Gas Sources		
Source	Activity amount	tCO ₂ -e
Scope 1		
Fleet vehicles - diesel	638 (kL)	1,740
Fleet vehicles - petrol	222 (kL)	484
Gas	12,044 (GJ)	621
Oils	2 (L)	0.001
Scope 2		
Electricity*#	10,497,097 (kWh)	8,518
Scope 3		
Electricity ** - transmission and distribution	10,497,097 (kWh)	1,232
Natural Gas -transmission and distribution	12,044 (GJ)	154
Fleet vehicles – diesel extraction and distribution	628 (kL)	89
Fleet vehicles – petrol extraction and distribution	222 (kL)	11
Street lighting	1,566,921 (kWh)	1,489
Paper ^	12,770 (kgs)	7
Waste disposal to landfill	407 (t)	95
Business travel—flights~	11,538 (km)	2
Sub total ~		14,429
Wastewater treatment – fugitive (Scope 1)	n/a	6,685
Total~		21,114
<p>*Includes 234,565kWh (equivalent to 223tCO₂-e avoided) from solar generation used on site. #The Scope 2 location and product electricity total are the same as no green electricity product is purchased. ^8 tonnes of paper was NCOS carbon neutral certified paper and treated as 0 emissions (equivalent to 13tCO₂-e avoided). ~Flights are a new source included in 2017-18. ~A baseline recalculation was undertaken in 2020 for changes in method wastewater. The recalculation allows for consistent reporting between years. The amounts reported here are the revised amounts. The difference between the original and recalculated amounts is significant. e to the simplified calculation method, wastewater emissions will be reported separately until further refinement of the method can be made to improve accuracy.</p>		

Table 3. 2017-18 Contribution (tCO ₂ -e)	
Water and Sewer- electricity and fugitive emissions	14,510
All other operations	6,603

Reporting Boundary

Council's greenhouse gas organisational boundary has been established in line with National Greenhouse and Energy Reporting Scheme and Greenhouse Gas Protocol using an operational control test for business unit activities and facilities. Figure 2 shows the activities and assets within the organisational reporting boundary. Facilities owned by Council and wholly leased to third parties are not included. Community emissions, such as household waste, are beyond the scope of Council's reporting of greenhouse gas emissions from its operations.

Complete activity data for all of the emission sources within the reporting boundary is not currently available. Data quality management plans are in place for other priority sources identified. Sources will progressively be included based on their relevance, materiality and measurability in line with the GHG Protocol and the National Carbon Offset Standard.

Sources currently not included

The following sources have not yet been quantified as either the data is not available or the sources are estimated to not be significant.

- Refrigerants from heating and cooling
- Outsourced printing other than rates and Wingecarribee Today
- Staff commuting to work in personal vehicles
- Business taxis, rental vehicles, public transport and accommodation
- Embodied emissions from equipment
- Fuel use from outsourced works
- Catering and events (waste from Tulip Time is included)
- Road making materials
- Freight and couriers
- Mulch products.

