

# Council Greenhouse Gas Emissions Report 2016-17

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This report covers greenhouse gas emissions from Council operations. It has been prepared with reference to the GHG Protocol, the National Carbon Offset Standard and the Carbon Neutral Program Guidelines. Calculations have been internally peer reviewed. The greenhouse gases included are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs). WSC does not have any sulphur hexafluoride (SF<sub>6</sub>) sources.

## Emission reduction actions

Council began switching to renewable energy in 2011 and has also undertaken a range of climate change adaptation projects. Council's Revolving Energy Fund (REFund) was created in 2012 as a mechanism to generate ongoing funding to complete projects that save energy or reduce energy cost. Eight projects have now been completed through the REFund with savings invested back into new projects.

Council has installed 214kW of solar PV systems on buildings to date, which includes the installation of a 99.75kW system on the Moss Vale War Memorial Aquatic Centre in June 2017. Other ongoing improvements include upgrades to water and sewer infrastructure that will reduce energy use from pumping. Council has commenced planning for a street lighting upgrade for 2017-18.

Council is developing an Energy Management Strategy and Action Plan to prioritise progress in energy management and reduce reliance on fossil fuels. 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.

For example, in 2016-17 two new sewerage pumping stations were constructed to provide services to new housing developments. Other factors that vary Council's emissions each year include weather events such as the intense heat

period in early 2017 which results in water treatment plants operating for longer periods to meet increased demand from the community.

## Emissions summary

For the period 2016-17, Council's greenhouse gas emissions total was 24,960 tCO<sub>2</sub>-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 71 percent of the total emissions. Table 3 provides a detailed breakdown of sources.

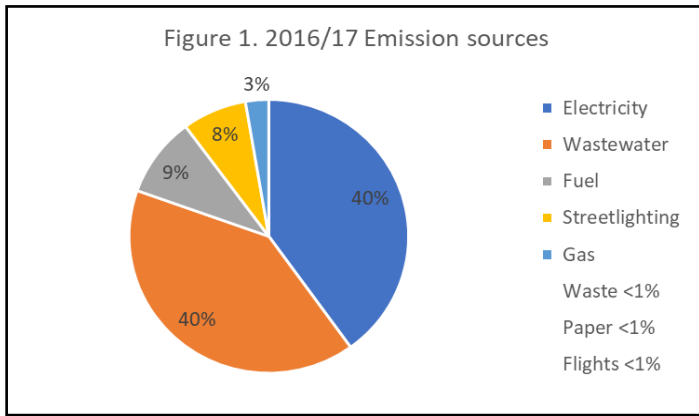
| Table 1. Greenhouse gas emissions over time (tCO <sub>2</sub> -e) |               |               |
|---|---------------|---------------|
| Scope   | 2015-16       | 2016-17       |
| Emissions excluding wastewater                                    |               |               |
| Scope 1   | 2,810         | 2,771         |
| Scope 2   | 9,039         | 8,705         |
| Scope 3   | 3,486         | 3,451         |
| <b>Sub Total</b>  | <b>15,334</b> | <b>14,927</b> |
| Wastewater fugitive emissions                                     |               |               |
| Scope 1   | 7,761         | 10,033        |
| <b>Total</b>  | <b>23,095</b> | <b>24,960</b> |

| Table 2. 2016-17 attributes (tCO <sub>2</sub> -e)   |               |
|---|---------------|
| Water and Sewer- electricity and fugitive emissions | 17,803        |
| All other operations                                | 7,157         |
| <b>Total</b>  | <b>24,960</b> |



For enquiries please contact the Customer Service team on 02 4868 0888



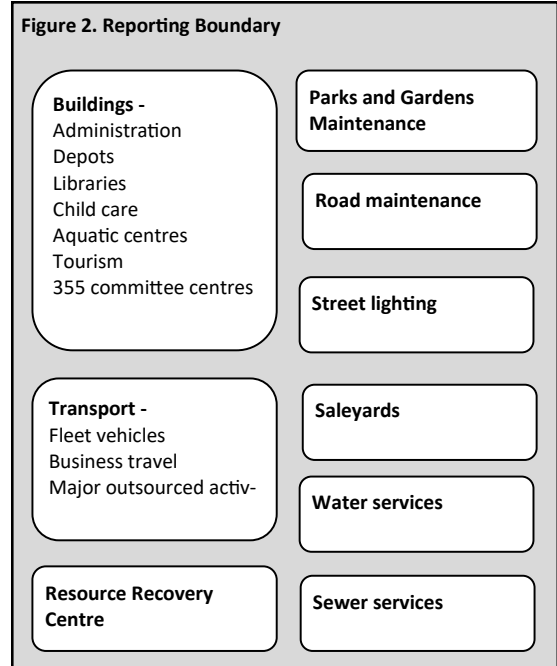


## Reporting Boundary

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.

## Breakdowns of sources

| Table 3. 2016-17 Greenhouse Gas Sources  |                  |                     |
|--|------------------|---------------------|
| Source   | Activity amount  | tCO <sub>2</sub> -e |
| <b>Scope 1</b>   |                  |                     |
| Fleet vehicles - diesel  | 671 (kL)         | 1830                |
| Fleet vehicles - petrol  | 188 (kL)         | 406                 |
| Gas  | 10,390 (GJ)      | 535                 |
| Oils   | 7 (L)            | 0.01                |
| <b>Scope 2</b>   |                  |                     |
| Electricity*#  | 10,431,388 (kWh) | 8705                |
| <b>Scope 3</b>   |                  |                     |
| <b>Electricity</b> ** - transmission and distribution  | 10,431,388 (kWh) | 1243                |
| <b>Natural Gas</b> - transmission and distribution   | 10,390 (GJ)      | 133                 |
| Fleet vehicles – diesel extraction and distribution  | 671 (kL)         | 93                  |
| Fleet vehicles – petrol extraction and distribution  | 188 (kL)         | 11                  |
| Street lighting  | 1,932,484 (kWh)  | 1855                |
| Paper ^  | 12,430 (kgs)     | 7                   |
| Business Travel—flights  | 20               | 3                   |
| Waste disposal to landfill   | 396 (t)          | 101                 |
| Sub total~   |                  | 14,927              |
| Wastewater treatment – fugitive (Scope 1)  | n/a              | 10,033              |
| <b>Total~</b>  |                  | <b>24,960</b>       |
| *Includes 73,132kWh (equivalent to 70 tCO <sub>2</sub> -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.   |                  |                     |
| ^9 tonnes of paper was NCOS carbon neutral certified paper and treated as 0 emissions (equivalent to 11tCO <sub>2</sub> -e avoided).   |                  |                     |
| ~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. Due to the simplified calculation method, wastewater emissions will be reported separately until further refinement of the method can be made to improve accuracy. |                  |                     |



## Sources currently not included

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.

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 flights, 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 sold.