

# Greenhouse Gas Emissions Report 2018/19

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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 (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), nitrogen fluoride (NF<sub>3</sub>) and sulphur hexafluoride (SF<sub>6</sub>) sources.

## Emission reduction actions

Council began switching to renewable energy in 2011. Council's Revolving Energy Fund (REFund) 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 REFund.

Emission reduction projects in 2018/19 included continuing to install efficient LED street lighting and installing a 30kW solar system at Robertson Wastewater Treatment Plant.

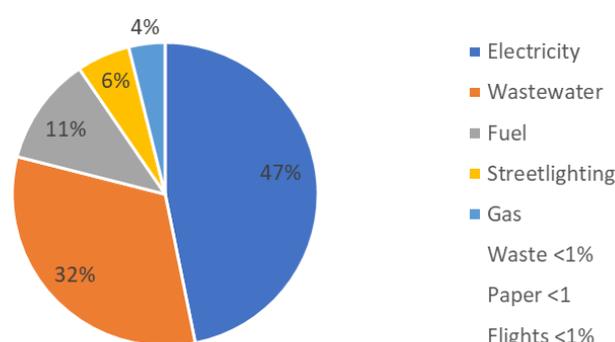
Council has also completed a climate change risk assessment and tracks ongoing work identified in the climate change adaptation strategy.

## Emissions summary

For the period 2018/19, Council's greenhouse gas emissions total was 20,214 tCO<sub>2</sub>-e (tonnes of carbon dioxide equivalent). 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 3 provides a detailed breakdown of sources.

| Table 1. 2018/19 Contribution (tCO <sub>2</sub> -e) |        |
|---|--------|
| Water and Sewer- electricity and fugitive emissions | 13,985 |
| All other operations                                | 6,230  |

Figure 1. 2018/19 Emission sources



## Changes over time

| Table 2. Greenhouse gas emissions over time (tCO <sub>2</sub> -e) |               |               |               |               |
|---|---------------|---------------|---------------|---------------|
| Scope   | 2015/16       | 2016/17       | 2017/18       | 2018/19       |
| Emissions excluding wastewater                                    |               |               |               |               |
| Scope 1   | 2,810         | 2,771         | 2,834         | 2,836         |
| Scope 2   | 9,039         | 8,705         | 8,518         | 8,394         |
| Scope 3   | 3,486         | 3,451         | 3,077         | 2,519         |
| <b>Sub total</b>  | <b>15,334</b> | <b>14,927</b> | <b>14,429</b> | <b>13,749</b> |
| Wastewater fugitive emissions                                     |               |               |               |               |
| Scope 1   | 7,761         | 10,033        | 6,685         | 6,465         |
| <b>Total</b>  | <b>23,095</b> | <b>24,960</b> | <b>21,114</b> | <b>20,214</b> |



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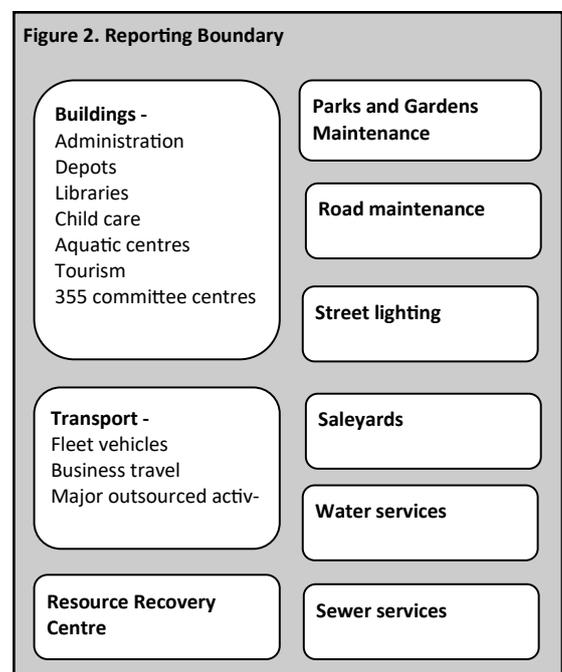
## Breakdowns of sources

| <b>Table 3. 2018/19 Greenhouse Gas Sources</b>   |                  |                     |
|--|------------------|---------------------|
| Source   | Activity amount  | tCO <sub>2</sub> -e |
| <b>Scope 1</b>   |                  |                     |
| Fleet vehicles - diesel  | 604 (kL)         | 1,645               |
| Fleet vehicles - petrol  | 270 (kL)         | 573                 |
| Gas  | 11,952 (GJ)      | 619                 |
| Oils   | 11 (L)           | 0.01                |
| <b>Scope 2</b>   |                  |                     |
| Electricity*#  | 10,533,334 (kWh) | 8,394               |
| <b>Scope 3</b>   |                  |                     |
| Electricity ** - transmission and distribution   | 10,533,334 (kWh) | 1,024               |
| Natural Gas -transmission and distribution   | 11,952 (GJ)      | 153                 |
| Fleet vehicles – diesel extraction and distribution  | 604 (kL)         | 84                  |
| Fleet vehicles – petrol extraction and distribution  | 270 (kL)         | 11                  |
| Street lighting  | 1,238,132 (kWh)  | 1,139               |
| Paper ^  | 10,389 (kgs)     | 7                   |
| Waste disposal to landfill   | 704 (t)          | 89                  |
| Business travel—flights  | 14,595 (kms)     | 2                   |
| <b>Sub total</b>   |                  | <b>13,749</b>       |
| Wastewater treatment – fugitive (scope 1)  | n/a              | 6,465               |
| <b>Total</b>   |                  | <b>20,214</b>       |
| <p>*Includes 296,524kWh (equivalent to 350tCO<sub>2</sub>-e avoided) from solar generation used on site.<br/>                     #The Scope 2 location and product electricity total are the same as no green electricity product is purchased.<br/>                     ^8 tonnes of paper was NCOS carbon neutral certified paper and treated as 0 emissions (equivalent to 13tCO<sub>2</sub>-e avoided).<br/>                     ~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.</p> |                  |                     |

## 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.