

Council Greenhouse Gas Emissions Report 2015-16

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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 (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro-fluorocarbons (HFCs), perfluorocarbons (PFCs). WSC does not have any sulphur hexafluoride (SF₆) sources.

Emission reduction actions

Council began switching to renewable energy in 2011 and has also undertaken a range of climate change adaptation projects. Council has installed 114kw of solar PV systems on council managed buildings to date. 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. Six projects have now been completed through the REFund with savings invested back into new projects.

Other ongoing improvements include upgrades to water and sewer infrastructure to reduce energy use and also reduce fugitive emissions. Council has also completed a climate change risk assessment for council operations and tracks ongoing work identified in the climate change adaptation strategy.

In 2015-16, the Civic Centre lighting upgrade was completed. Old fluorescent lights were replaced with energy efficient LED lights. This is estimated to reduce electricity use by 149,755 Kwh annually with the additional benefit of also reducing maintenance.

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.

Emissions summary

For the period 2015-16, Council's greenhouse gas emissions total was 23,095 tCO₂-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 68 percent of the total emissions. Table 3 provides a detailed breakdown of sources.

Table 1. Greenhouse gas emissions by scope (tCO ₂ -e)	
Scope	2015-16
Emissions excluding wastewater	
Scope 1	2,810
Scope 2	9,039
Scope 3	3,486
Subtotal	15,334
Wastewater fugitive emissions	
Scope 1	7,761
Total	23,095

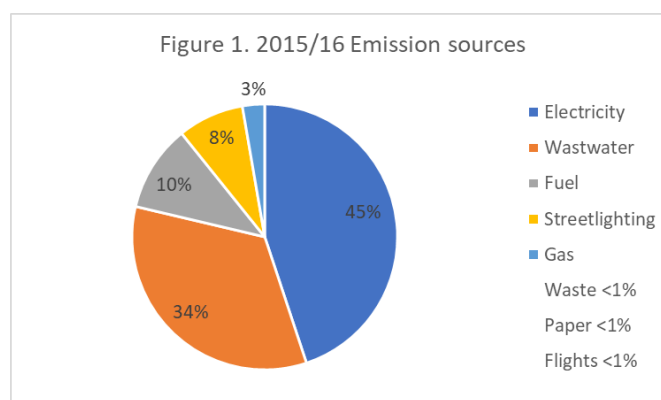


Table 2. 2015-16 attributes	
Water and Sewer- electricity and fugitive emissions	15,629 tCO ₂ -e
All other operations	7,466 tCO ₂ -e
Total	23,095 tCO₂-e



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Breakdowns of sources

Table 3. 2015-16 Greenhouse Gas Sources		
Source	Activity amount	tCO ₂ -e
Scope 1		
Fleet vehicles - diesel	710(kL)	1,933
Fleet vehicles - petrol	176 (kL)	379
Gas	9,663 (GJ)	498
Oils	26 (L)	0.01
Scope 2		
Electricity*#	10,749,006 (kWh)	9,039
Scope 3		
Electricity ** - transmission and distribution	10,749,006 (kWh)	1,280
Natural Gas -transmission and distribution	9,663 (GJ)	124
Fleet vehicles – diesel extraction and distribution	710 (kL)	99
Fleet vehicles – petrol extraction and distribution	176 (kL)	10
Street lighting	1,9324,270 (kWh)	1,857
Paper ^	12,495 (kgs)	6
Business Travel—flights	20	3
Waste disposal to landfill	441 (t)	107
Sub-Total ~		15,334
Wastewater treatment – fugitive (Scope 1)	n/a	7,761
Total~		23,095
*Includes 82,105kWh (equivalent to 79tCO ₂ -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. ^7 tonnes of paper was NCOS carbon neutral certified paper and treated as 0 emissions (equivalent to 12tCO ₂ -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.		

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.

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
- 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
- Road making materials
- Freight and couriers
- Mulch products sold.