

University of Melbourne

2017 Greenhouse Gas Assessment Summary

The 2017 greenhouse gas (GHG) assessment for the University of Melbourne (UoM) is a refresh of the comprehensive assessment conducted by a consultant, Pangolin Associates, for the 2016 calendar year. For the 2017 calendar year, the activity data was updated¹ and this summary prepared by UoM.

Based on the best available data, the estimated carbon emissions for 2017 were 200,050 tCO₂-e (tonnes of carbon dioxide equivalent). This estimate includes indirect, or scope 3, emissions where possible.

As in 2016, purchased electricity is the largest contributor to the University's emissions. The University's Sustainability Plan target of zero-emissions electricity commits the University to reducing or offsetting these emissions to zero by 2021, and activities are well underway to achieve this target.

Table 1. Statement of GHG emissions for UoM

Operational Boundary	Associated Inventory/Service	2017 (tCO ₂ -e/yr)
Scope 1	Natural Gas, Transport Fuels, Stationary Fuels, Refrigerants	15,197.1
Scope 2	Purchased Electricity	118,516.8
Scope 3	Equipment, Flights, Third Party Services, Off-site Waste Disposal, Transmission & Distribution losses, Fuel Extraction, Production & Distribution losses, Other Utilities	66,336.3
Gross Total		200,050.3
Offsets	Other offsets (to offset fleet emissions)	0.0
Net total (scope 1, 2 & 3)		200,050.3
Scope 1 & 2		133,713.9

¹ For consistency, emissions factors from 2016 have been used in 2017, except where updated by the Australian Government here: <https://www.environment.gov.au/climate-change/climate-science-data/greenhouse-gas-measurement/publications/national-greenhouse-accounts-factors-july-2017>

The following table summarises the University's GHG emissions by activity sector. Emissions generated through utilities consumption, including electricity, natural gas, telecommunication, internet and water, make up around 73 percent of the University's carbon footprint.

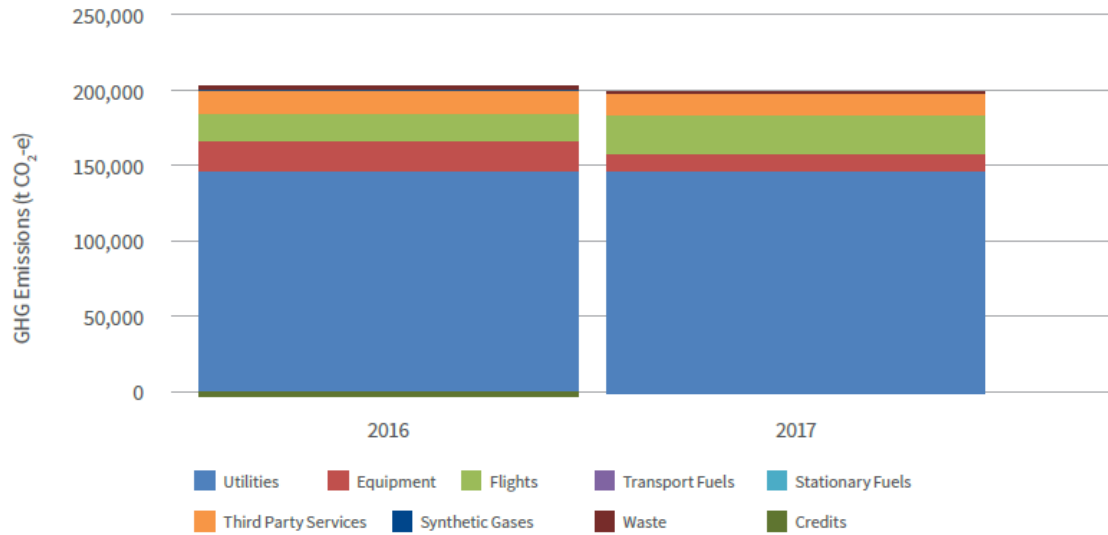
Table 2. Summary of GHG emissions by activity

Activity Sector	Activity/Service	2017 Emissions (t CO ₂ -e/yr)	Percentage
Utilities	Electricity	129,490.6	64.7%
	Natural Gas	15,146.7	7.6%
	Telecommunications	800.0	0.4%
	Internet	800.0	0.4%
	Water	493.8	0.2%
Equipment	IT Equipment	10,519.6	5.3%
	Paper	171.3	0.1%
	Stationery	1,388.8	0.7%
	Packaging (cardboard)	0.0	
Flights	Business Flights	24,663.0	12.3%
Transport Fuels	Post 2004 Gasoline	250.4	0.1%
	Post 2004 Diesel oil	196.1	0.1%
Stationary Fuels	LPG	184.2	0.1%
Third Party Services	Cleaning Services	5,978.5	3.0%
	Food & Catering	1,038.9	0.5%
	Postage (Aus Post)	81.8	0.0%
	Couriers	314.0	0.2%
	Printing	2,998.2	1.5%
	Advertising	1,365.5	0.7%
	Hotel Accommodation - domestic	948.5	0.5%
	Hotel Accommodation - international	547.6	0.3%
Synthetic Gases	Refrigerant	517.9	0.3%
Waste	Waste-landfill	1,856.2	0.9%
	Recycling	298.7	0.1%
Gross total		200,050.3	100.0%
Credits/Offsets	Other (Offset)	0.0	
Net total		200,050.3	

Certificates will be purchased to offset the emissions from the University's vehicle fleet. This is currently managed by financial year rather than calendar year, and hence has not been included in this inventory.

Figure 1 shows a comparison of 2016 and 2017 GHG emissions. Emissions have dropped slightly from 2016 to 2017 across scopes 1, 2 and 3.

Figure 1: UoM Greenhouse Gas Emissions by Activity Sector



Natural gas and electricity data is available by individual campus, however other data cannot currently be split between campuses. Electricity and gas comprise 72 percent of the total UoM emissions for 2017. Figure 2 shows the greenhouse gas emissions for these utilities by campus.

