



NORTHERN
ALLIANCE FOR
GREENHOUSE
ACTION

Melbourne City Energy Profile

Helping Council to improve policies, target programs,
and promote energy smart communities.

Municipal Energy Profile

Introduction

This Municipal Energy Profile provides a comprehensive overview of energy (gas and electricity use) and associated emissions in the municipality. It shows the trends in energy consumption for residential, commercial and industrial sectors with totals for each suburb. The profile drawn upon energy data for the period 2004-2014.

Background

The Northern Alliance for Greenhouse Action (NAGA) has been working to obtain local energy data since 2008. NAGA is working to ensure urgent, regional action in our transition to a climate-changed low-carbon future. NAGA supports councils commitments to enhance the wellbeing of their municipalities. Information provided by Victorian electricity and gas distributors to NAGA forms the basis of the profiles.

MEFL has developed a detailed municipal data tool to record raw energy consumption data. This data has been used to construct energy profiles for each of the councils and presents the most comprehensive set of local level energy information produced in Australia.

The profiles demonstrate NAGA's commitment to local leadership in climate change action.

Applications

The availability of local information on energy consumption and trends enables councils to:

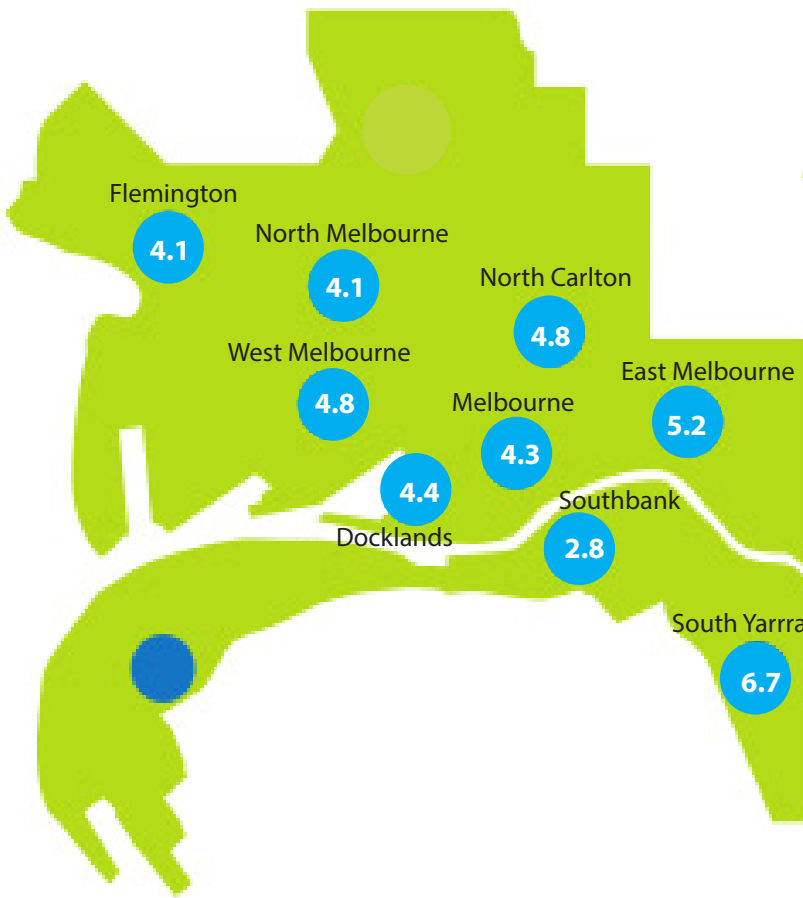
- » improve targeting of policies, programs and incentives to reduce energy demand by knowing where consumption and emissions are highest;
- » identify and target effort for maximum impact;
- » communicate to create a better informed community on energy use, carbon pollution and costs; and
- » monitor the effectiveness of energy saving and emission reduction programs and progress towards local, regional or state targets.

Acknowledgements

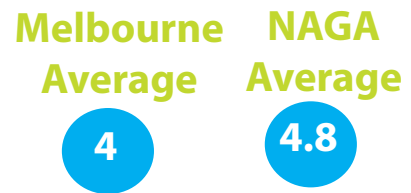
The Municipal Energy Profile was originally developed for NAGA by Moreland Energy Foundation, with funding from the Victorian Government. NAGA acknowledges Victoria's gas and electricity distributors for providing data used to develop this profile.

Enquires

Every attempt has been made to verify the data, however it should be noted that this report is intended to be iterative and your feedback is welcome. The detailed data on which this profile has been developed is located within the municipal data tool; for more information please contact NAGA.

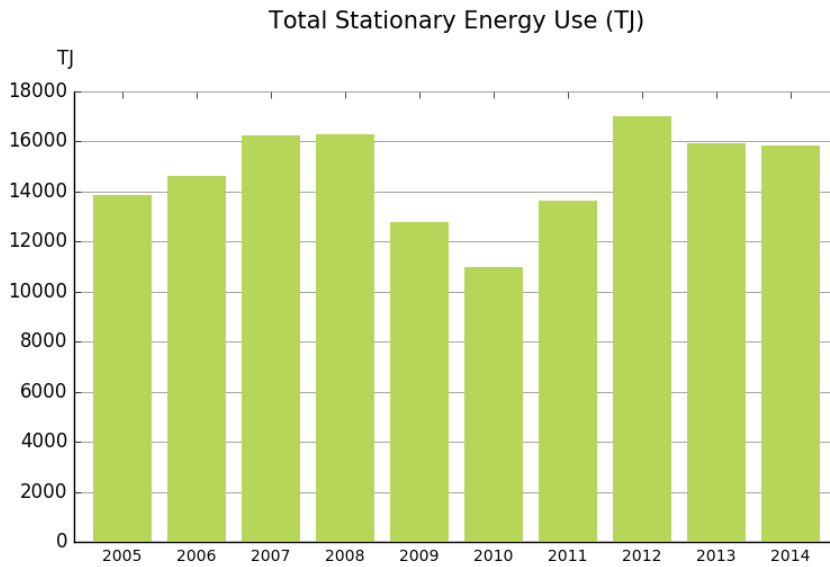


Melbourne



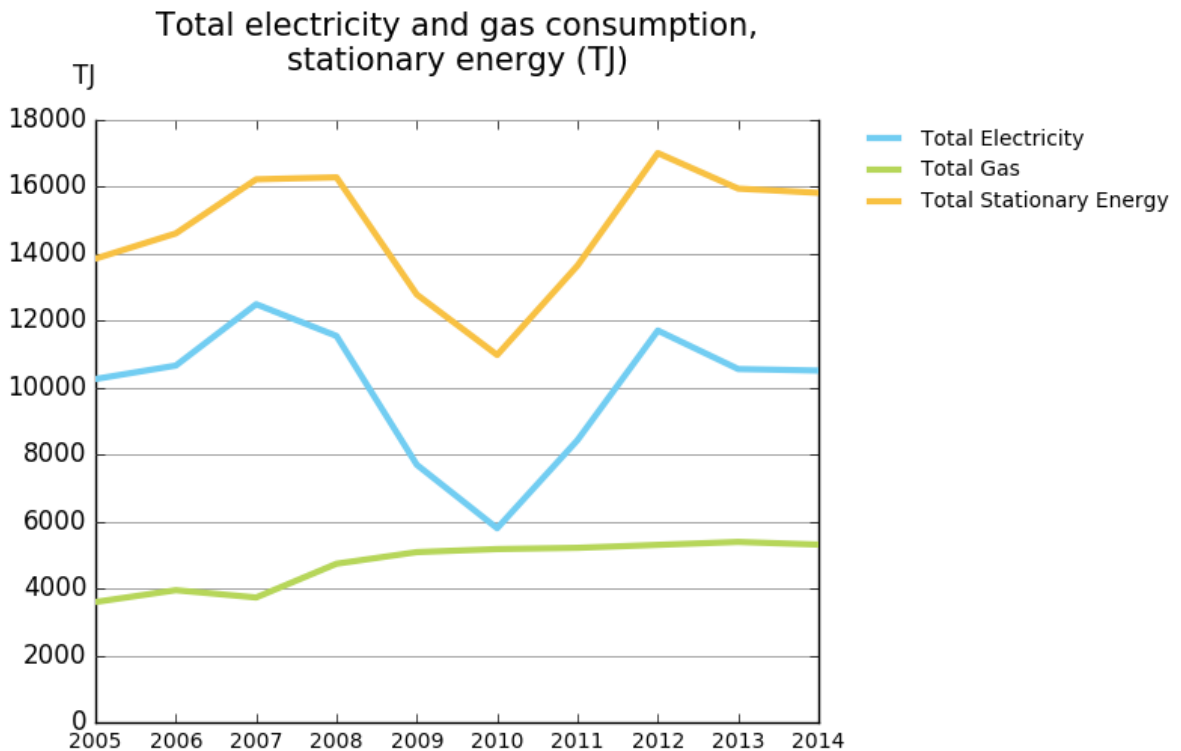
Changes from 2009 to 2014

	Melbourne Average	NAGA Average
Annual decrease in daily household electricity use	-8.08%	-4.3%
Annual decrease daily household gas use per year	+0.4%	-2%
Annual decrease in daily household GHG emissions	-9.7%	-5.2%



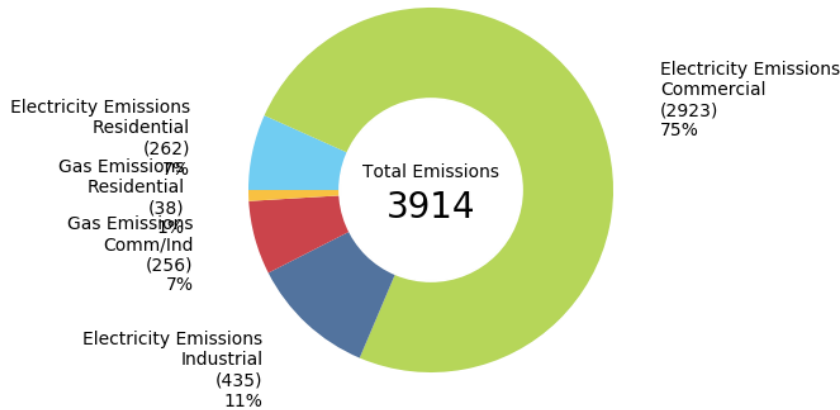
There appears to be a high degree of variation in the consumption data supplied for Melbourne, which may be a result of inaccurate or incomplete data being made available, or substantial shifts in reporting methods.

Melbourne's average daily household usage of electricity is lower than the NAGA average



Melbourne's energy consumption

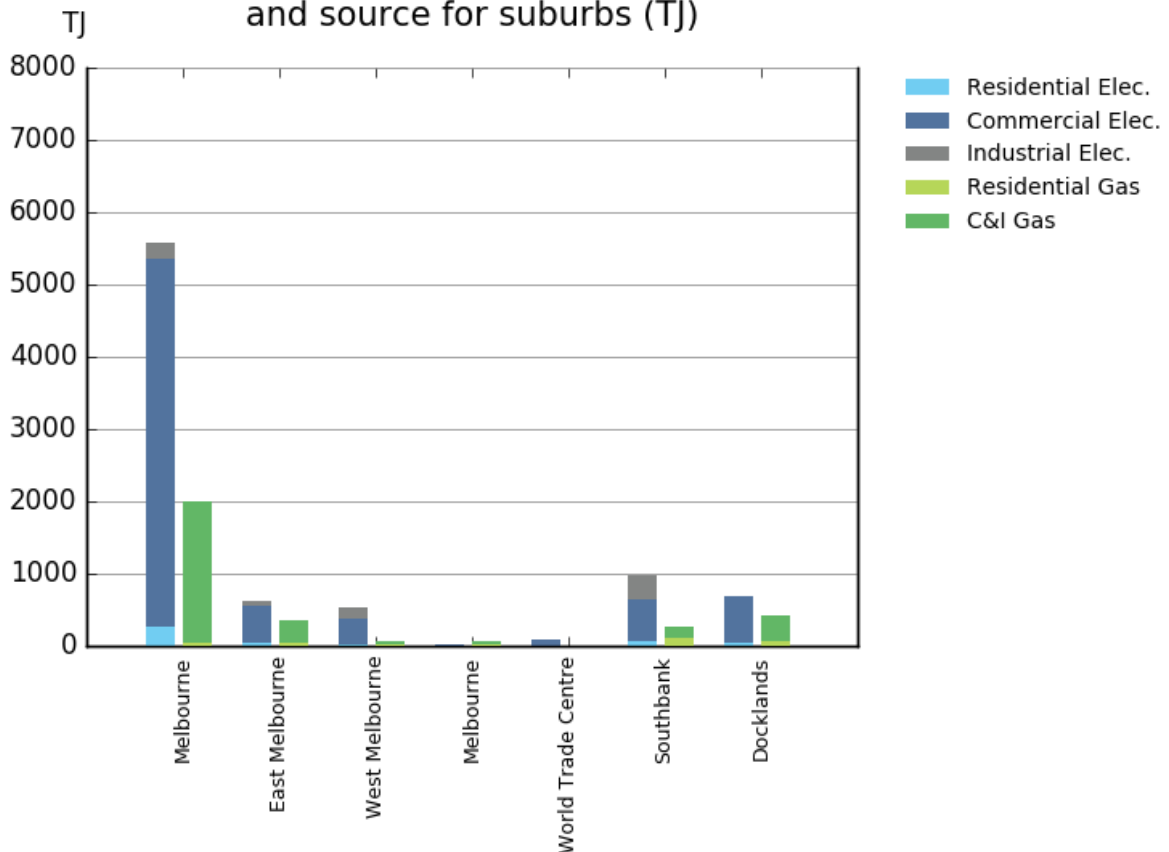
2014 Sector Emissions kt CO2-e/year



The total stationary energy consumption for the municipality combines gas and electricity used in the residential, commercial and industrial sectors.

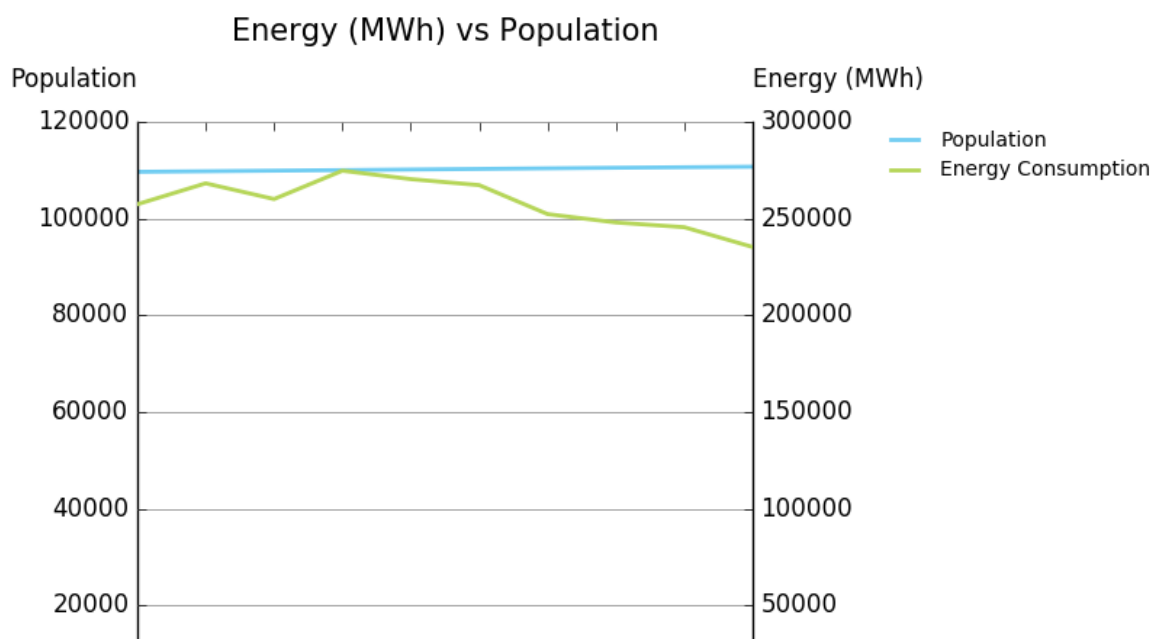
For electricity, megawatt hours (MWh) have been converted to terajoules (TJ). Note that there has been substantial variation in the electricity consumption data for Melbourne that may be attributable to a range of causes, but is likely due to issues with reporting.

2014 annual energy use by sector and source for suburbs (TJ)



*Shared with other municipalities

Residential Energy



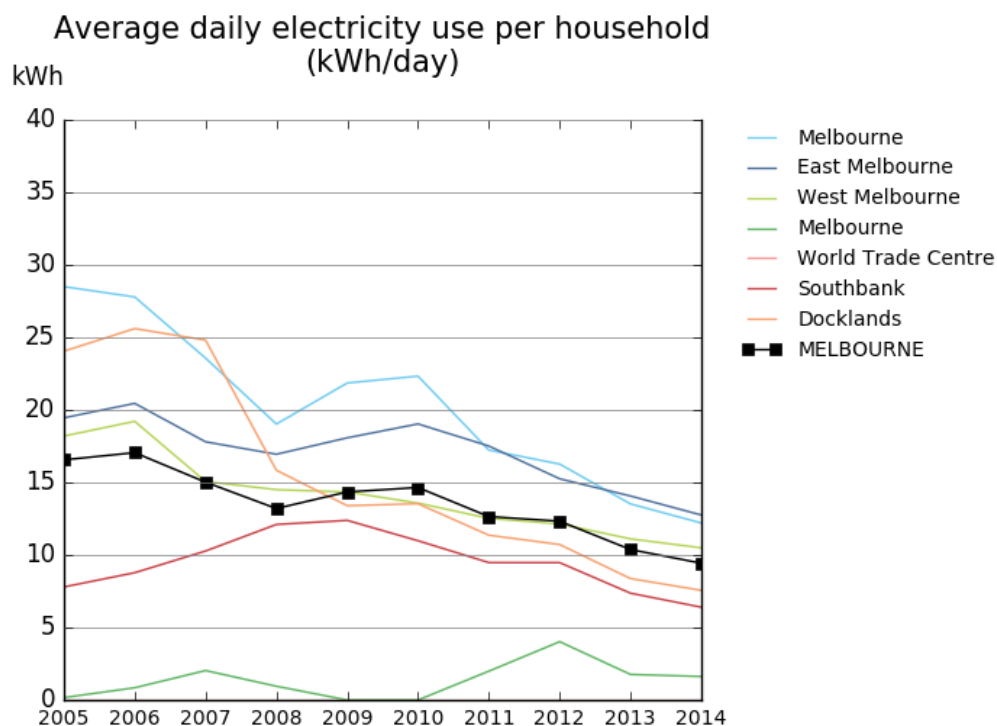
The population of Melbourne continues to grow substantially, however there are indications that electricity consumption is growing at a reduced rate relative to this.

Solar Energy

Melbourne has seen a more modest uptake of solar than other municipalities, which is likely to largely relate to the very high proportion of apartments and the built up environment that inhibits the installation of systems.

Suburb in 2014	Postcode	No. Systems	Installed PV kW
Melbourne - 3000	3000	10	115
East Melbourne	3002	17	140
West Melbourne	3003	34	139.6
Melbourne - 3004*	3004	1	11.6
World Trade Centre	3005	0	0
Southbank	3006	7	55.9
Docklands	3008	71	333
Flemington*	3031	181	520
North Melbourne	3051	42	251
Melbourne Total		529	1883

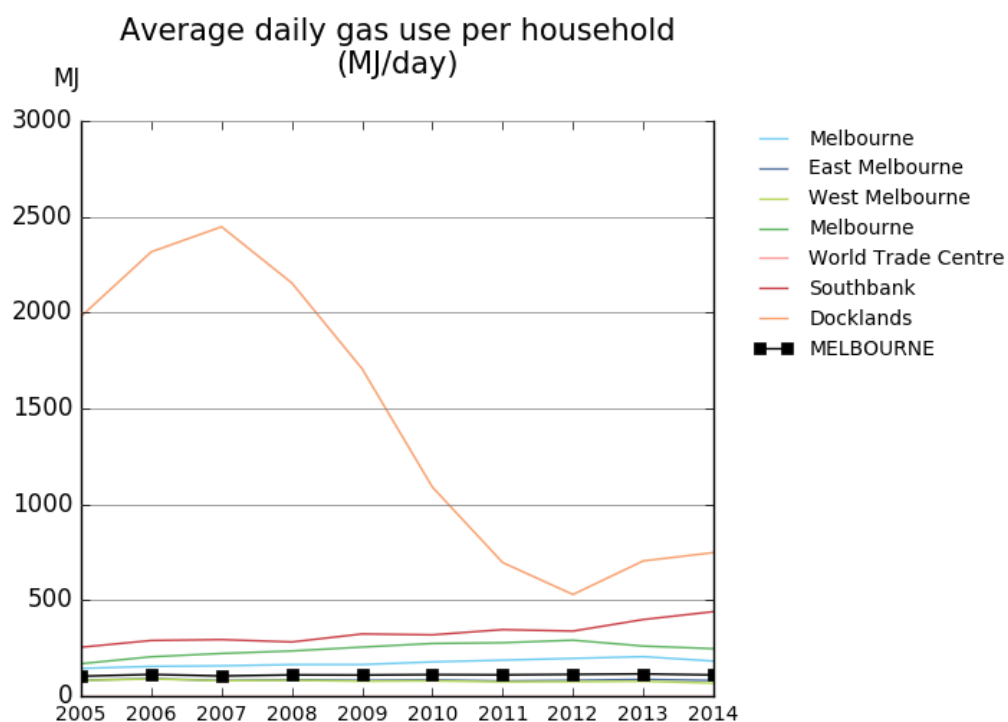
Energy consumption by sector



Overall electricity consumption is trending downwards for Melbourne, however there is still a high degree of variability.

Suburb in 2014	Postcode	Electricity kWh/hh/day	Electricity kWh/person/day
Melbourne - 3000	3000	12.2	4.3
East Melbourne	3002	12.8	5.2
West Melbourne	3003	10.5	4.8
World Trade Centre	3005	0.0	
Southbank	3006	6.4	2.8
Docklands	3008	7.6	4.4
Flemington*	3031	9.7	4.1
North Melbourne	3051	8.6	4.1
Carlton	3053	7.8	4.1
North Carlton	3054	9.3	4.8
South Yarra*	3141	11.4	6.7
Garden City*	3207	11.9	7.2
Melbourne Average		9.4	4
NAGA Average		11.6	4.8

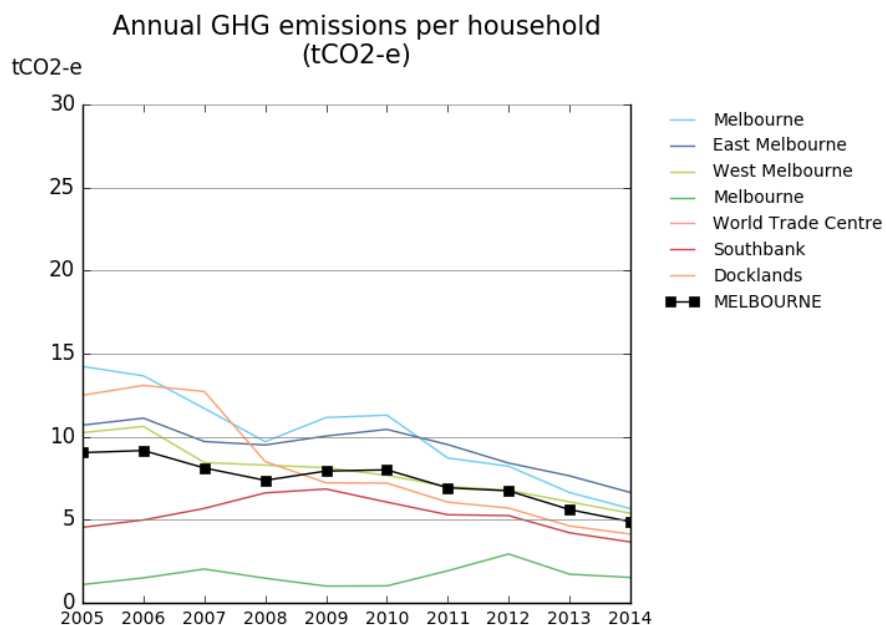
Residential Gas



These gas consumption trends are dominated by Docklands, which may be due to errors in the records around total number of connected households.

Suburb in 2014	Postcode	Gas Usage MJ/hh/day
Melbourne - 3000	3000	182
East Melbourne	3002	81
West Melbourne	3003	67
Melbourne - 3004*	3004	247
World Trade Centre	3005	
Southbank	3006	440
Docklands	3008	748
Flemington*	3031	93
North Melbourne	3051	65
Parkville	3052	92.3
Carlton	3053	77.2
North Carlton	3054	91.2
South Yarra*	3141	89.3
Garden City*	3207	110.3
Melbourne Average		110.2
NAGA Average		137.6

Residential greenhouse gas emissions



Overall the trend in emissions per household is downwards, which may reflect the increasing number of apartments in the makeup of the residential sector in Melbourne in addition to the reflecting national trends in per-household consumption.

Suburb in 2014	Postcode	CO ₂ Emissions tCO ₂ e/hh/year
Melbourne - 3000	3000	5.7
East Melbourne	3002	6.6
West Melbourne	3003	5.4
World Trade Centre	3005	
Southbank	3006	3.7
Docklands	3008	4.1
Flemington*	3031	5.7
North Melbourne	3051	4.6
Parkville	3052	6.3
Carlton	3053	3.9
North Carlton	3054	5.9
South Yarra*	3141	6.4
Garden City*	3207	6.6
Melbourne Average		4.9
NAGA Average		7.5