



NAGA

NORTHERN  
ALLIANCE FOR  
GREENHOUSE  
ACTION

# Nillumbik Shire

## 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 draws 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**

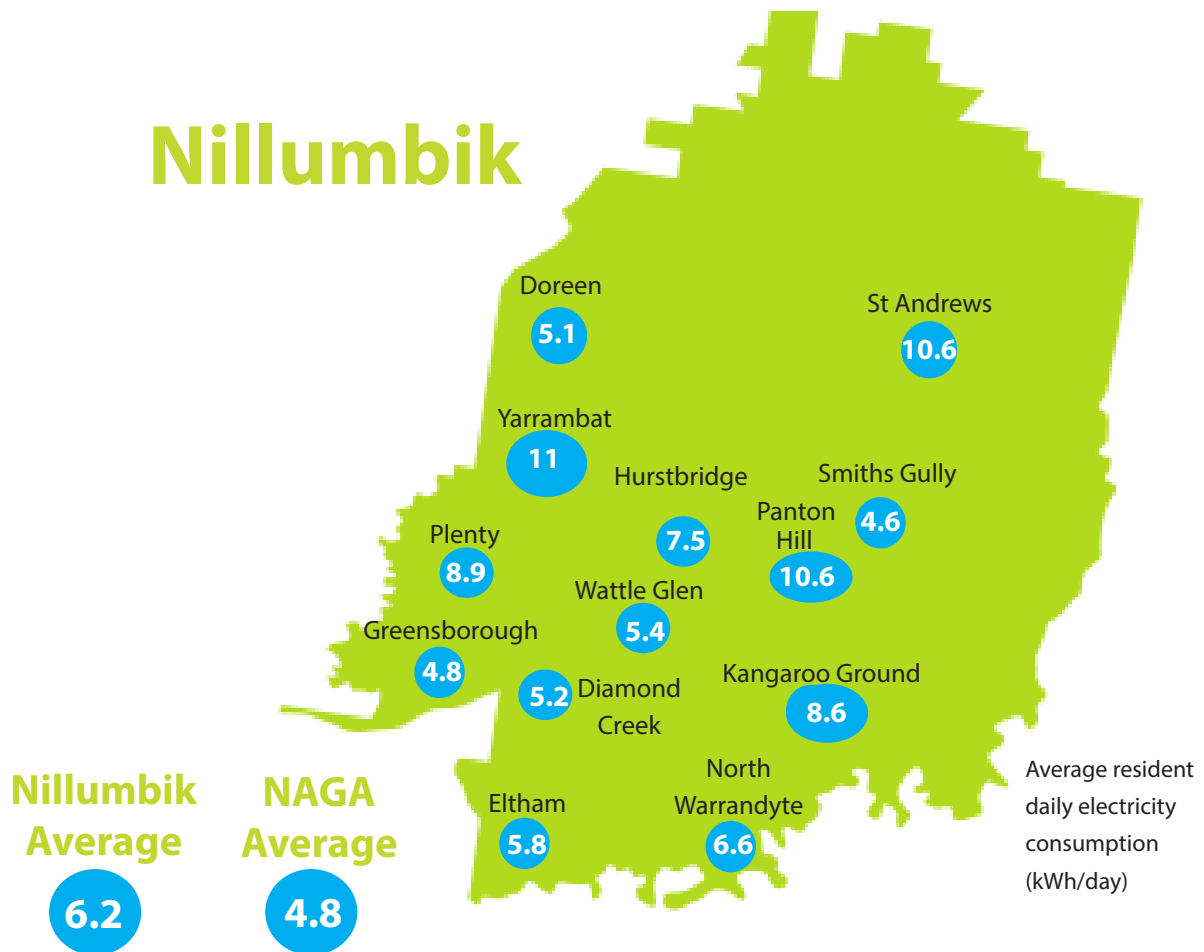
The Municipal Energy Profile was originally developed for NAGA by Moreland Energy Foundation, with funding from the Victorian Government. NAGA acknowledges Victoria's gas and electricity distributors for providing data used to develop this profile.

### **Enquiries**

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 contact NAGA for details.

Also, since 2014 new population data has been used compared to previous years. As population data has previously been based on a 2011 dataset it was necessary to rework the dataset to better reflect the postcode population data. This has implications for calculating average household and per person energy consumption.

# Nillumbik

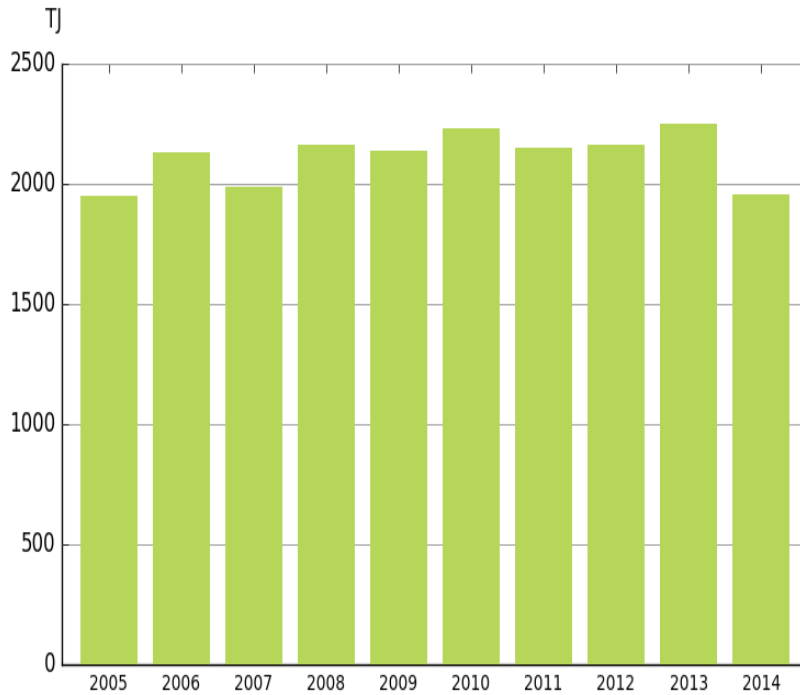


## Changes from 2009 to 2014

	Nillumbik Average	NAGA Average
Annual decrease in daily household electricity use	-4.1%	-4.3%
Annual decrease daily household gas use per year	-2.2%	-2%
Annual decrease in daily household GHG emissions	-4.8%	-5.2%

## Nillumbik's energy consumption

Total Stationary Energy Use (TJ)

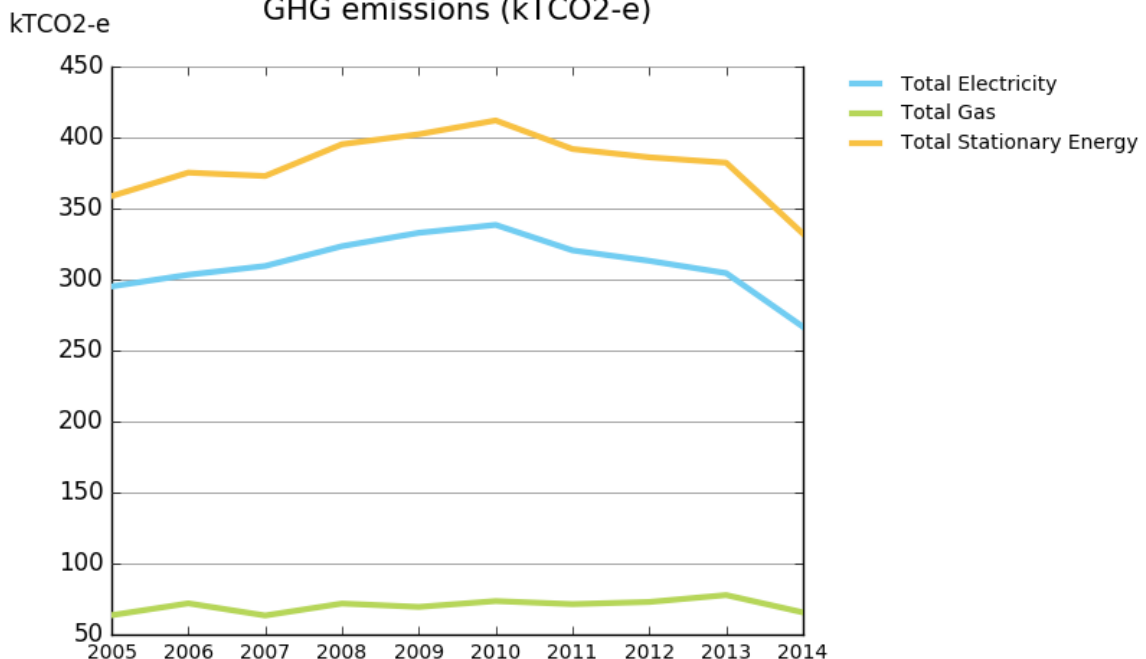


The total stationary energy consumption for the municipality combines gas and electricity used in the residential, commercial and industrial sectors.

For electricity, megawatt hours (MWh) have been converted to terajoules (TJ).

Nillumbik's average daily household usage of electricity is higher than the NAGA average

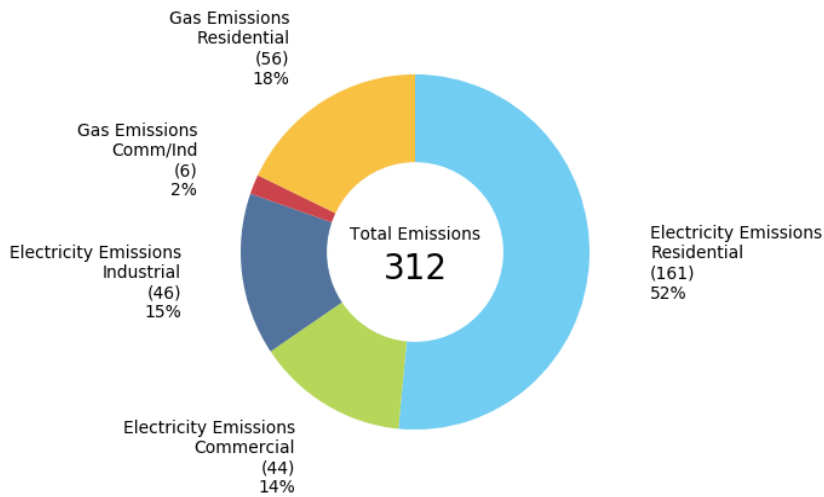
Total electricity and gas consumption, GHG emissions (kTCO<sub>2</sub>-e)



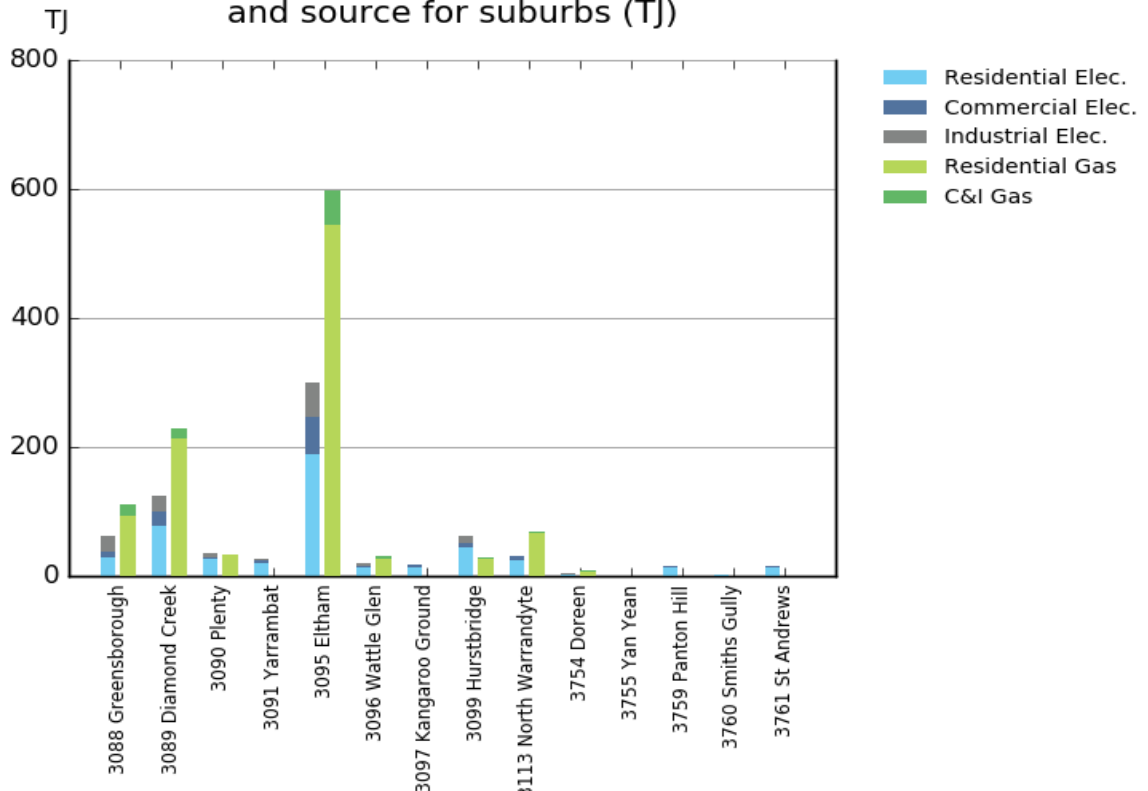
## Energy consumption by sector

Emissions for electricity consumption are slightly lower compared to the previous year across all sectors except industrial. Gas consumption has remained relatively stable.

2014 Sector Emissions kt CO<sub>2</sub>-e/year

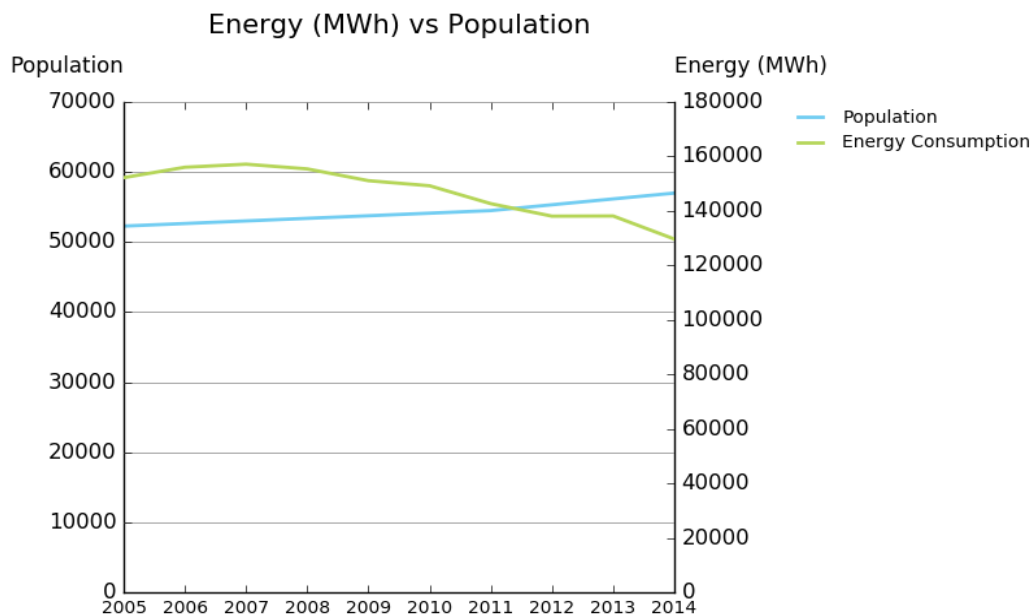


2014 annual energy use by sector and source for suburbs (TJ)



\*Shared with other municipalities

## Residential Energy

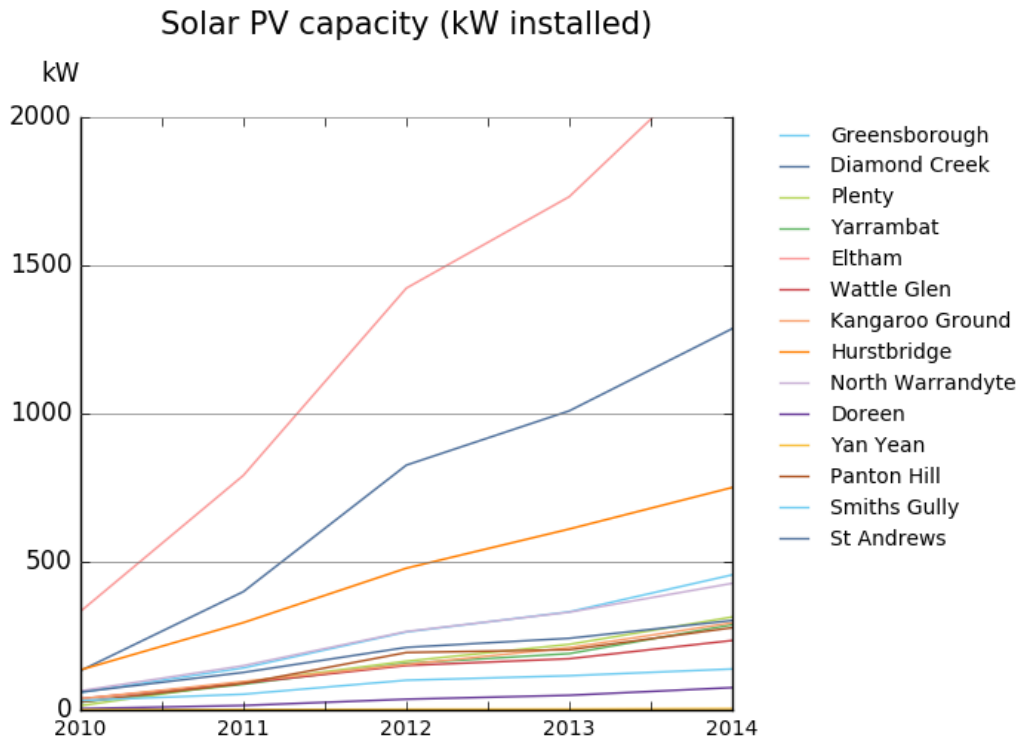


The population of Nillumbik continues to grow modestly, however since 2009 this growth has not seen a corresponding increase in electricity consumption with indications that it is now trending downwards.

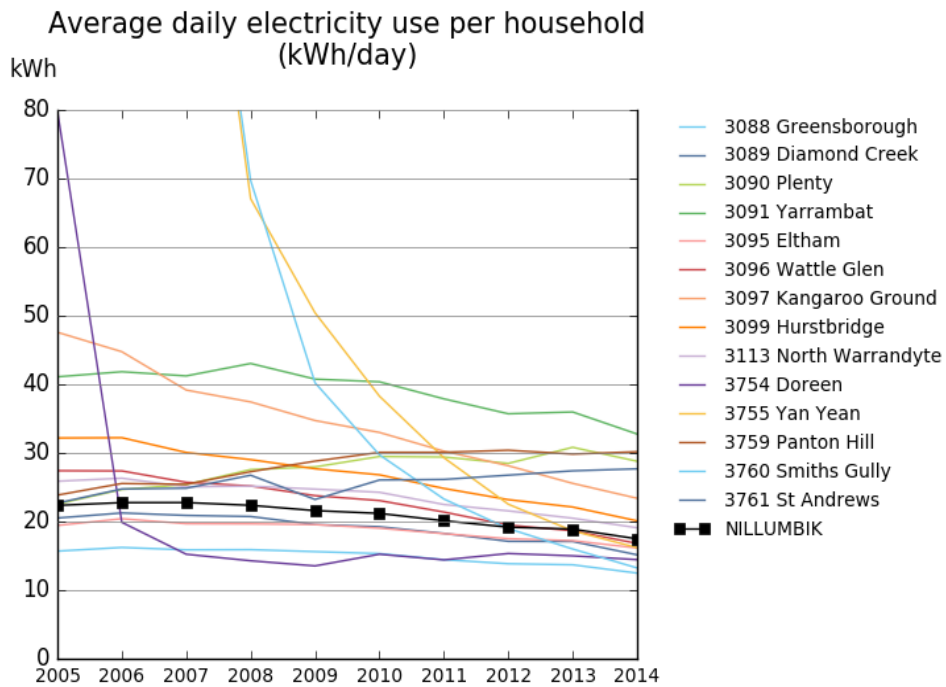
## Solar Energy

There has been a moderate adoption of solar PV across the municipality. The total amount installed by the end of 2014 is outlined below.

Suburb in 2014	Postcode	No. System	Installed PV kW
Greensborough	3088	172	456
Diamond Creek	3089	442	1287
Plenty	3090	79	314
Yarrambat	3091	76	288
Eltham	3095	787	2255
Wattle Glen	3096	86	234
Kangaroo Ground	3097	93	294
Hurstbridge	3099	254	750
North Warrandyte	3113	141	427
Smiths Gully	3760	40	138
Panton Hill	3759	79	277
St Andrews	3761	93	301
<b>Nillumbik Total</b>		<b>2393</b>	<b>7169</b>



## Residential Electricity

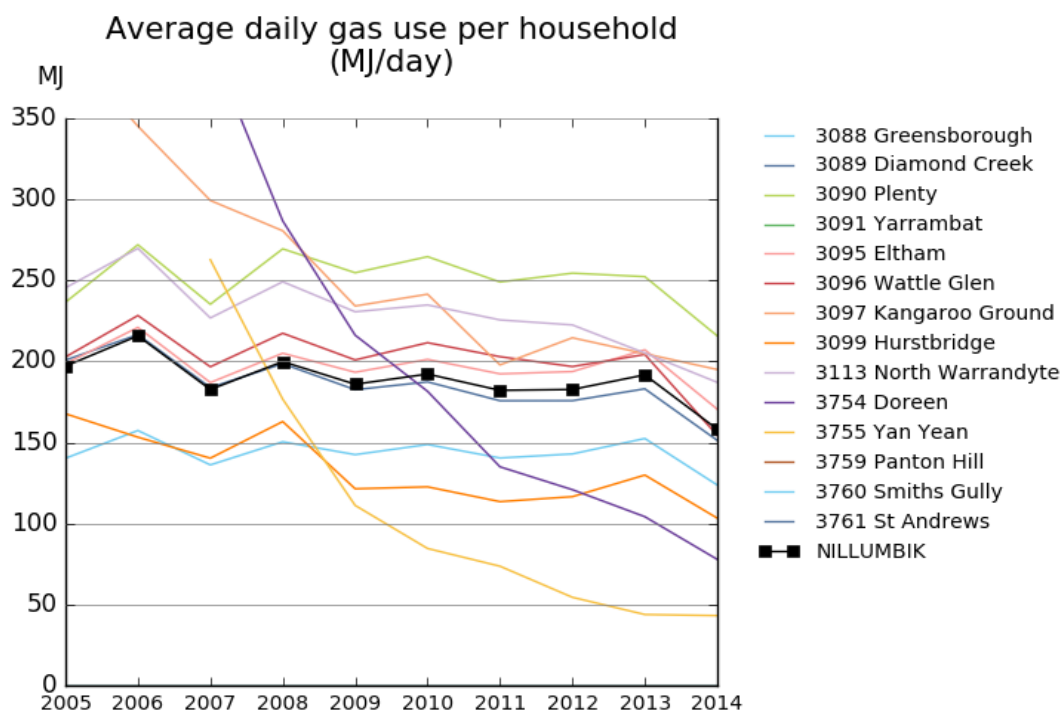


Overall electricity consumption is trending downwards for Nillumbik. For a couple of suburbs it still remains quite high, however in some instances (such as Yarrambat) this may be due to lower levels of reticulated gas services in these areas.

Suburb in 2014	Postcode	Electricity kWh/hh/day	Electricity kWh/person/day
Greensborough	3088	12.4	4.8
Diamond Creek	3089	14.9	5.2
Plenty	3090	28.7	8.9
Yarrambat	3091	32.5	11
Eltham	3095	16.1	5.8
Wattle Glen	3096	16.5	5.4
Kangaroo Ground	3097	22.8	8.6
Hurstbridge	3099	19.9	7.3
North Warrandyte	3113	18.9	6.6
Doreen	3754	13.8	5.1
Panton Hill	3759	30.8	10.8
Smiths Gully	3760	12.5	4.6
St Andrews	3761	28.3	10.6
<b>Nillumbik Average</b>		<b>17.5</b>	<b>6.2</b>
<b>NAGA Average</b>		<b>11.6</b>	<b>4.8</b>



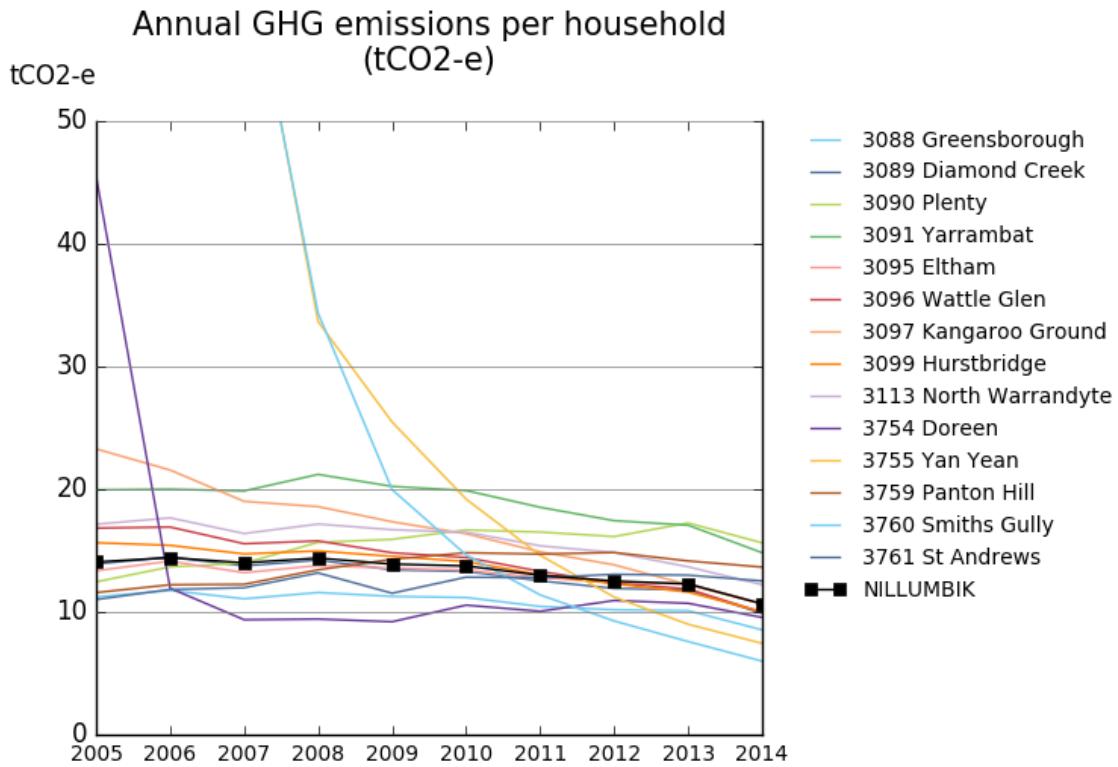
## Residential Gas



Gas consumption per household in Nillumbik has remained relatively stable over the last 5 years. Kangaroo Ground has exceptionally high consumption, however this may be a result of incorrect data (with only a small number of connections listed).

Suburb in 2014	Postcode	Gas Usage MJ/hh/day
Greensborough	3088	123.7
Diamond Creek	3089	151.3
Plenty	3090	215.8
Yarrambat	3091	
Eltham	3095	170.5
Wattle Glen	3096	154.4
Kangaroo Ground	3097	195
Hurstbridge	3099	103.3
North Warrandyte	3113	187.1
Panton Hill	3759	
Smiths Gully	3760	
St Andrews	3761	
<b>Nillumbik Average</b>		<b>158.2</b>
<b>NAGA Average</b>		<b>137.6</b>

## Residential greenhouse gas emissions



Greenhouse gas emissions per household are relatively stable for Nillumbik, trending downwards after 2008.

Suburb in 2014	Postcode	CO <sub>2</sub> Emissions tCO <sub>2</sub> e/hh/year
Greensborough	3088	8.5
Diamond Creek	3089	9.9
Plenty	3090	15.6
Yarrambat	3091	14.8
Eltham	3095	10.7
Wattle Glen	3096	10
Kangaroo Ground	3097	10.7
Hurstbridge	3099	10
North Warrandyte	3113	12.2
Doreen	3754	9.6
Panton Hill	3759	13.7
Smiths Gully	3760	6
St Andrews	3761	12.5
<b>Nillumbik Average</b>		<b>10.7</b>
<b>NAGA Average</b>		<b>7.5</b>