

Use of Wood and Coal for Home Heating

HIGHLIGHTS:

- In 2013, 542,000 households in New Zealand used wood for home heating and 61,000 households used coal.
- The use of coal and wood fires for home heating has been declining since 1996.
- Compared to 2006, the number of household using wood and coal for home heating decreased by 6% and 38% respectively in 2013.



Use of wood and coal fires in home heating is a major source of air pollution in New Zealand

Source: <http://www.stuff.co.nz/timaru-herald/news/7182910/Surge-in-bad-air-gripes>

Home heating through the use of wood and coal fires is a major source of air pollution in most towns and cities of New Zealand (Naeher et al 2007, HAPINZ 2012). Wood and coal fires emit particulate matter, carbon monoxide (CO), nitrogen dioxide (NO₂) and other organic compounds (Fisher et al 2007). Using wood and coal as a source of fuel for home heating can also lead to poor air quality within the households.

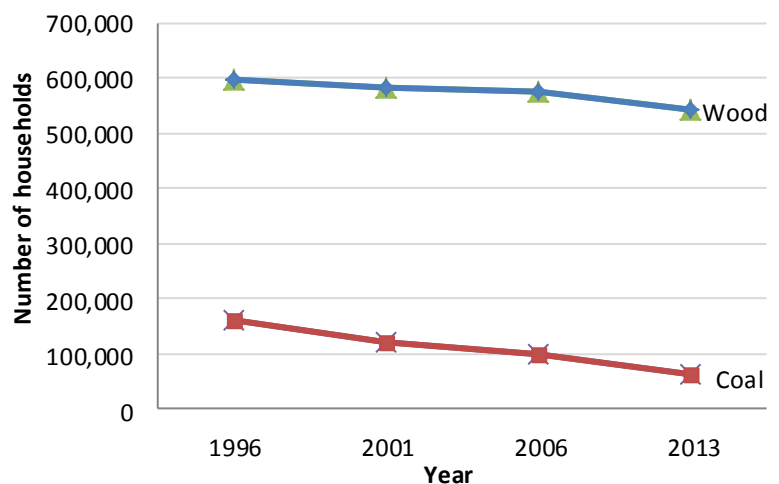
Air pollution can affect people’s health, especially their heart and lungs – and can even lead to premature death. Particulate matter causes most of the health effects from air pollution. Wood and Coal fires are the largest contributor of human made particulate matter (PM₁₀) in New Zealand.

The Health and Air Pollution in New Zealand (HAPINZ) study estimated there was an increase of 4.8% in the national average mortality rate associated with air pollution (Fisher et al 2007).

The use of wood and coal fires has been declining since 1996

The use of coal and wood fires for home heating has been declining. During the period 1996 to 2013, the number of household using wood for home heating fell by 9%, and the use of coal by 62% (Figure 1).

Figure 1: Number of households using wood and coal fire for home heating



Source: Statistics New Zealand. (2014), (2011).

Use of Wood and Coal for Home Heating

Compared to 2006, the number of household using wood and coal for home heating decreased by 6% and 38% respectively in 2013.

In 2013, 542,000 households used wood for home heating, and 61,000 households used coal. Compared to 2006, fewer household used wood and coal fires for home heating in 2013. The number of household using wood and coal for home heating has decreased by 6% and 38% respectively (Table 1).

In 2013, electricity and wood were the most popular sources for home heating. More than one third of homes used wood fire(37%*), compared to 41%* in 2006. (Table 1)

The use of coal fires ranked the 5th among all fuel types for home heating. In 2013, only 61,000 homes (4%*) used coal fire, compared to 7%* in 2006.

Note: * The denominator of this number is the total number of household responded to the fuel types used in home heating. The denominator does not include the number of household whose respond unidentifiable or without a respond.

Table 1: Fuel types used for home heating in households 2006 and 2013 Censuses

Fuel types	Number of occupied private households		2006-2013 Censuses % change
	2006 Census	2013 Census	
Electricity	1,051,095	1,168,914	11 ↑
Wood	574,485	542,283	6 ↓
Bottled Gas	388,746	227,742	41 ↓
Mains Gas	185,826	176,772	5 ↓
Coal	98,226	60,999	38 ↓
No Fuels Used	33,177	44,832	35 ↑
Solar Power	15,159	23,409	54 ↑
Other Fuel(s)	29,304	23,118	21 ↓
Total households stated	1,405,557	1,475,565	---

Source: Statistics New Zealand (2014)

Note:

- Occupied private households using more than one fuel type for heating have been counted in each category. Therefore the total number of responses will be greater than the total number of occupied private households.
- Types of fuel are in descending order according to the number of households reported in 2013.

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