

Total Energy Consumed by Fuel Type

HIGHLIGHTS:

- **Energy consumption may affect health.**
- **New Zealand consumed 578 Petajoules (PJ) of energy in 2016, an increase of 1 percent from 2015.**
- **Oil continued to be the predominant type of energy consumed in New Zealand from 1990 to 2016.**



Source: <http://www.med.govt.nz/sectors-industries/energy/energy-modelling/modelling/new-zealands-energy-outlook-electricity-insight>

Energy consumption may affect health

The consumption of energy is a major source of air pollution. The burning of fossil fuels releases particulate matter (such as PM₁₀) and gases, which can have negative effects on health (Kjellström, 2004). Furthermore, the use of fossil fuels adds to carbon dioxide in the atmosphere, contributing to greenhouse gases and potentially climate change, which has the potential to affect health (Kjellström, 2004).

New Zealand uses a variety of energy sources, including:

- renewable (e.g., hydro-electricity, geothermal energy, biogas, and wind and solar power)
- non-renewable sources (e.g., fossil fuels like coal, oil and gas).

New Zealand's total energy consumption increased slightly between 2015 and 2016

In 2016, New Zealand consumed 578 PJ of total energy – a one percent increase from the previous year. Forty-six percent (267 PJ) of consumed energy was from oil, followed by 24 percent (140 PJ) from electricity.

Energy consumption from natural gas and coal increased by 3.8 percent and 2.3 percent respectively in 2016. Energy demand for electricity and other renewables both fell by 1.6 and 1.5 percent respectively in 2016 (Table 1).

Table 1: Total energy consumed (PJ), by fuel type, 2015-2016

Fuel type	2015	2016	Change (%)
Oil	261.2	266.8	2.2
Electricity	142.6	140.3	-1.6
Gas	78.9	81.8	3.8
Renewables	62.9	62.0	-1.5
Coal	26.1	26.7	2.3
Total	571.7	577.6	1.0

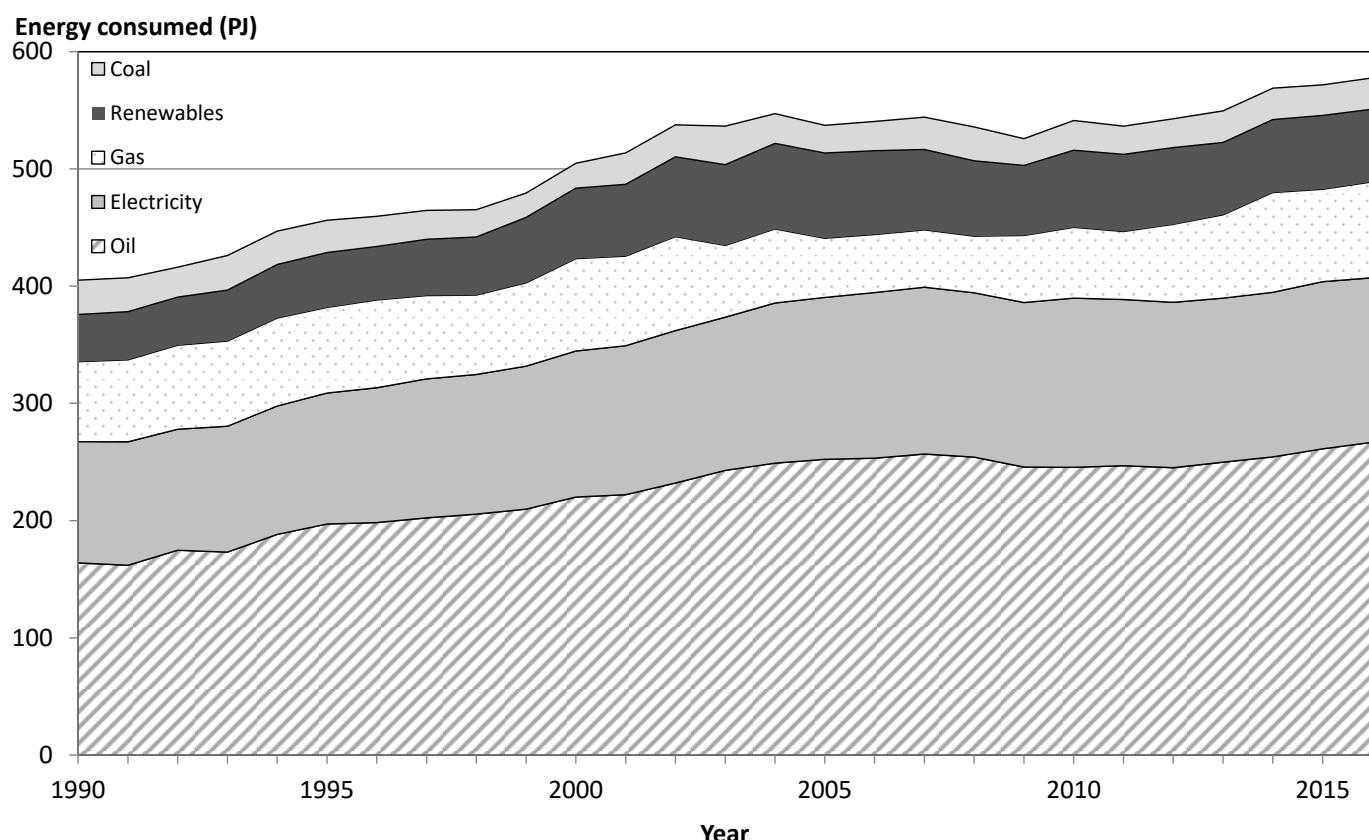
Source: Ministry of Business, Innovation & Employment (MBIE), 2017

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Oil is the predominant type of energy consumed in New Zealand

Oil has remained the predominant type of energy consumed in New Zealand since 1990, accounting for 45 percent of total energy consumption, followed by electricity (25%), gas (13%) and renewables (12%). Coal only made up five percent of consumer energy between 1990 and 2016 (Figure 1).

Figure 1: New Zealand's total energy consumption (PJ), by fuel type, 1990-2016



Note: Industrial excludes fuel used for electricity generation, as this is counted under energy transformation.

Source: Ministry of Business, Innovation & Employment (MBIE), 2017

REFERENCES

- Kjellström T. (2004). Air Quality and Health. In: Cromar N, Cameron S, Fallowfield H. (Eds.). *Environmental Health in Australia and New Zealand* (pp. 274-92). Melbourne: Oxford University Press.
- Ministry of Business, Innovative & Employment (MBIE). (2017). *Energy in New Zealand 2017*. Retrieved from <http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-data-modelling/publications/energy-in-new-zealand>

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