



New Zealand Energy Quarterly

September 2024 Summary

Low hydro lake levels require continued reliance on coal and gas for electricity

Despite record wind and geothermal power generation in the July to September quarter, below average hydro inflows until mid-August resulted in the third lowest level of hydro generation in a September quarter on record. As result, other sources such as coal were needed to generate enough power for New Zealand homes and businesses until conditions improved.

The combination of low lake levels and a period of reduced wind power generation in early August, meant relying on other forms of generation to keep enough power flowing. Demand side reduction at our largest industrial electricity user, combined with an increased use of coal and a small amount of diesel, were necessary to cover the resulting generation shortfall.

With hydro generation this quarter down 16.6 per cent to 5,584 GWh – 48.4 per cent of total generation for the quarter – coal fired generation increased. Electricity generation from coal was 884 GWh; a 156.5 per cent increase on the same quarter last year. Coal fired generation made up 7.7 per cent of the overall generation this quarter. The use of non-renewable energy sources resulted in a 31 per cent increase in emissions from electricity generation compared to last September.

Increasing generation at the new Tauhara geothermal station helped geothermal power hit a record 2,363 GWh this quarter; a 15.2 per cent increase from the September quarter 2023. Similarly, the Harapaki Wind Farm becoming fully operational and windier conditions from mid-August contributed to record wind generation for the quarter with 1,094 GWh produced; a 17.8 per cent increase on the same quarter last year.

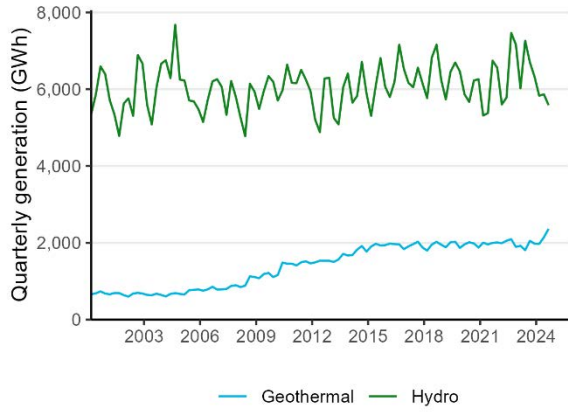
In August Meridian asked New Zealand Aluminium Smelters to reduce their electricity consumption as per its demand side response agreement. This contributed to a 10.2 per cent decrease in industrial electricity consumption, contributing to a 2.5 per cent (272 GWh) decrease in overall consumption for the quarter.

Net gas production was 30.05 PJ, a drop of 22 per cent on this quarter last year. Non-energy use of gas was down 3.84 PJ or 57 per cent on September 2023 as Methanex (New Zealand's largest user of gas) idled all their production facilities to free up gas for the other users in the market. This took effect in mid-August with only one plant being restarted at the end of October.

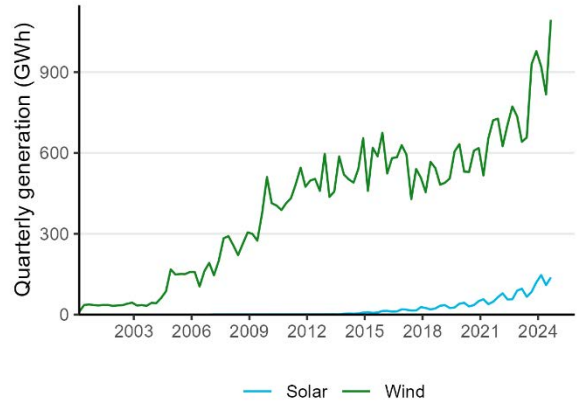


Summary charts

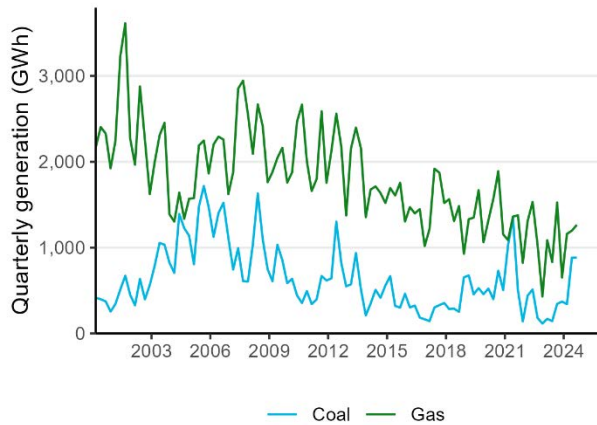
Electricity generation from hydro and geothermal



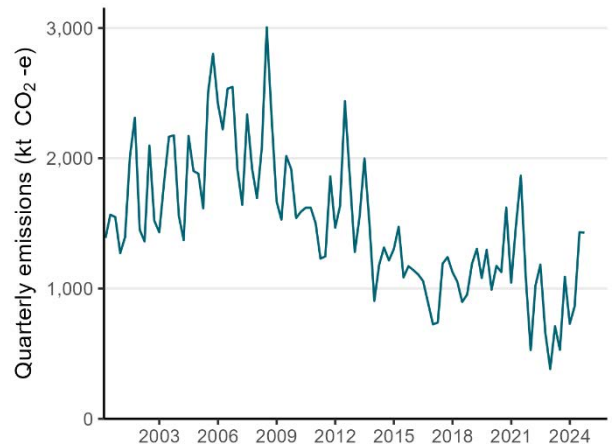
Electricity generation from solar and wind



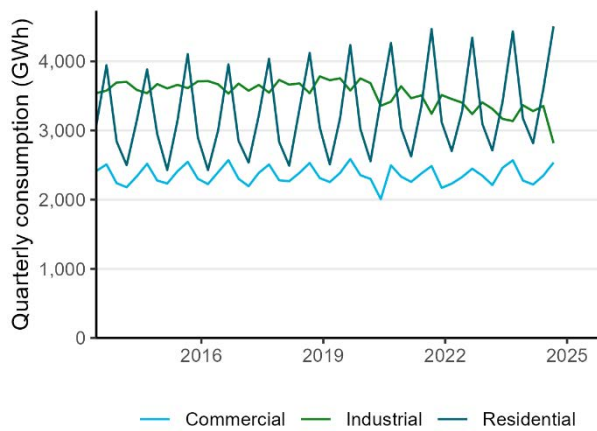
Electricity generation from coal and gas



CO₂-e emissions from electricity generation



Electricity consumption by sector



Non-energy gas use

