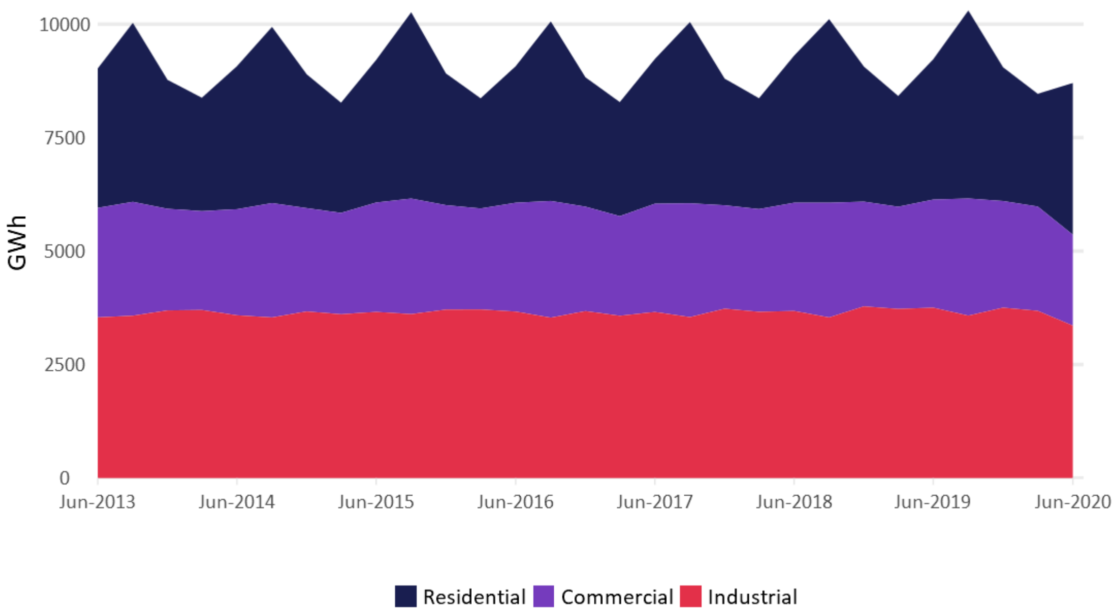
COVID-19 restrictions affected energy demand

New Zealand spent most of the June 2020 quarter at COVID-19 Alert Level 2 or above. Alert Level 4, which covered most of April, saw only essential services operating with non-essential businesses closed.[1,2] This combined with continued restrictions on travel were most evident in demand for oil and electricity during the quarter.

The restrictions on non-essential business, schools, and other closures resulted in a change in the sectoral composition of national electricity demand during the June quarter. Residential demand increased 8.2 per cent compared to the same quarter last year, driven by increased usage by households with people remaining at home during the day. In contrast, demand by the industrial and commercial sectors fell 13 per cent over the same period. A warmer than usual winter and relatively dry conditions increased the need for irrigation and electricity demand for agriculture rose. The overall demand for electricity compared to June quarter 2019 decreased by 5.1 per cent.

Electricity consumption by major sector



Electricity generation reflected falling demand

There was a 5.4 per cent decrease in total electricity generated in this quarter compared to the June 2019 quarter.

The fall in electricity generation was predominantly seen in the 12 per cent reduction in electricity generation from hydro, driven by unfavourable hydro conditions and maintenance.

---

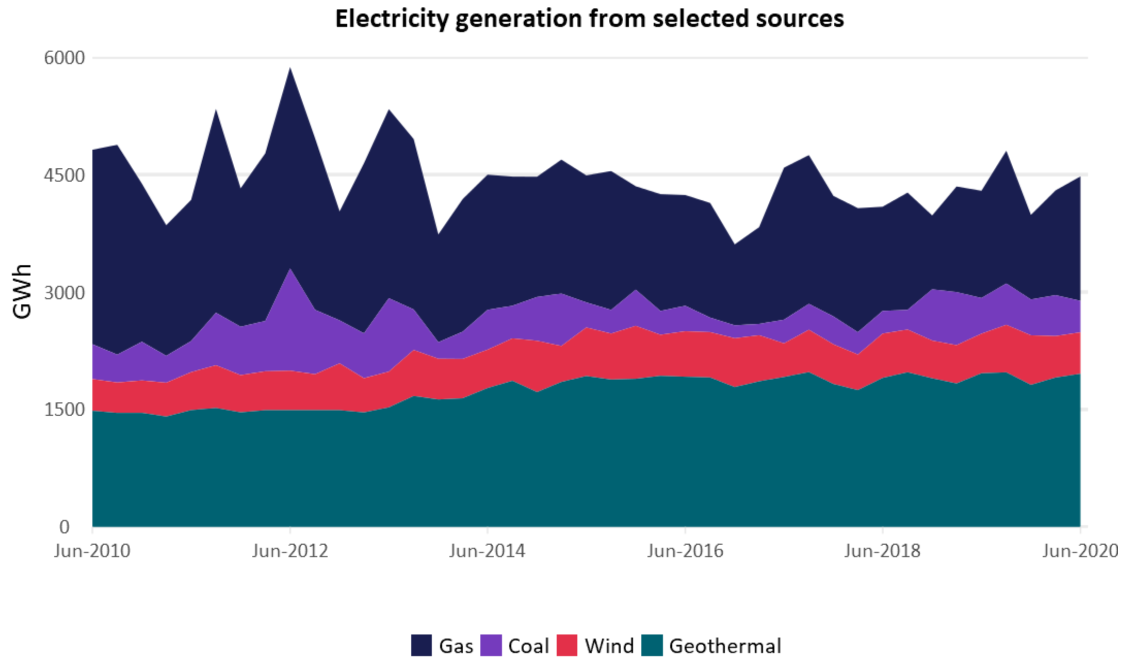
[1] For information on the essential services that were running during Alert Level 4 and 3, see https://www.mbie.govt.nz/assets/essential-services-workforce-factsheet.pdf

[2] https://covid19.govt.nz/assets/resources/tables/COVID-19-alert-levels-detailed.pdf

Both North and South Island storage levels were below average in the quarter, with warm weather impacting inflows in both islands. Maintenance and major refurbishment was also undertaken at the Tekapo, Whakamaru and Aratiatia schemes further affecting hydro generation.

Electricity generation from geothermal remained steady and generation from wind increased 4.6 per cent. However this was not enough to compensate for the large fall in hydro generation, and as a result the share of electricity generation from renewable sources fell to 80.6 per cent in the June quarter from 83.2 per cent a year ago. This is the lowest share for a June quarter since 2017, which also saw a dry winter.

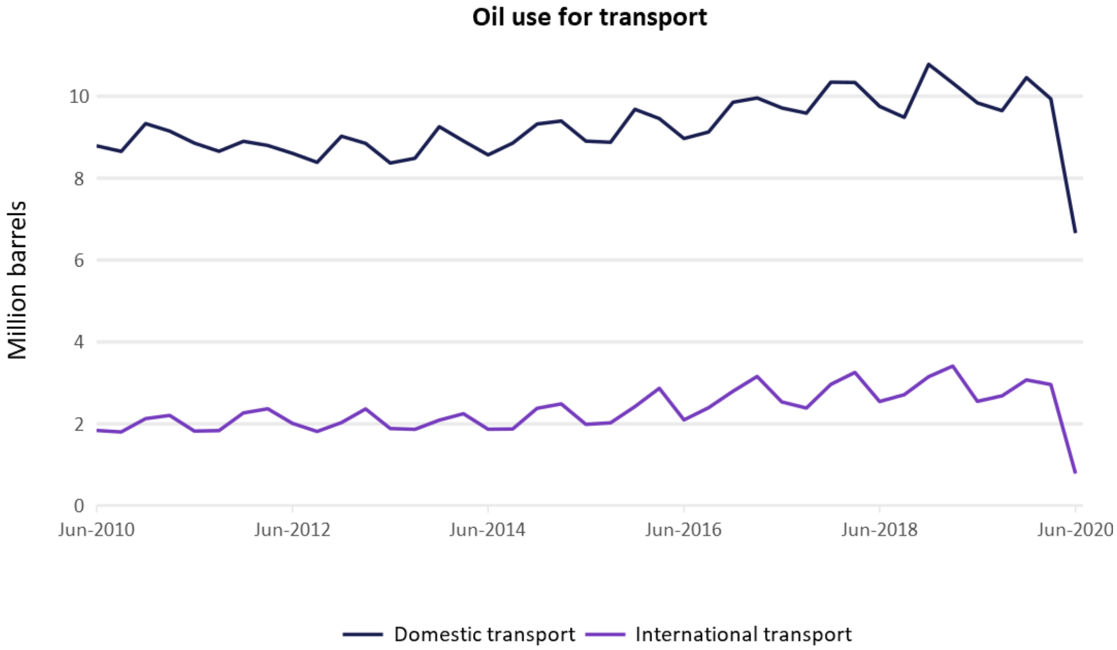
The fall in renewable generation meant that non-renewable generation increased. While generation from coal fell 12 per cent to its lowest level since the September 2018 quarter, generation from gas rose 16 percent. The additional requirement for gas use saw Genesis make a third Rankine unit (which is able to be run on coal or gas) available at the Huntly Power Station.



Global and domestic fuel demand continued to fall

Restrictions on travel, as well as reduced business activity, resulted in a 28 per cent fall in fuel demand. Oil consumption in the June quarter 2020 was the lowest since the September quarter 1998. With regional and international travel restricted for much of the quarter, oil demand for domestic transport fell 32 per cent and 69 per cent for international transport compared to June quarter 2019. This fall in demand facilitated a drop in crude oil imports by 62 per cent. Petrol, diesel, fuel oil and aviation fuels imports dropped by of 4324 per cent. With crude imports and demand falling, output at the refinery fell 52 per cent compared to June 2019 quarter.

Globally, oil markets experienced significant price shocks. The international fall in oil demand due to COVID-19, as well as increased production by Saudi and Russian oil fields at the start of the year, pushed prices for oil down significantly. Although OPEC+[3] agreed in April to cut oil production by 9.7 million barrels per day, oil prices for the period were still below the June quarter 2019. Domestically retail fuel prices fell, with premium petrol, regular petrol and retail diesel prices falling 12 per cent, 15 per cent and 24 per cent respectively.



[3] https://www.argusmedia.com/en/news/2095593-opec-agrees-to-cut-97mn-bd-update-2