

Energy fact sheet

18–24 June 2020

Weekly electricity demand:

102%

of historical demand.

Weekly fuel and automotive spend:

83%

of pre-lockdown levels.

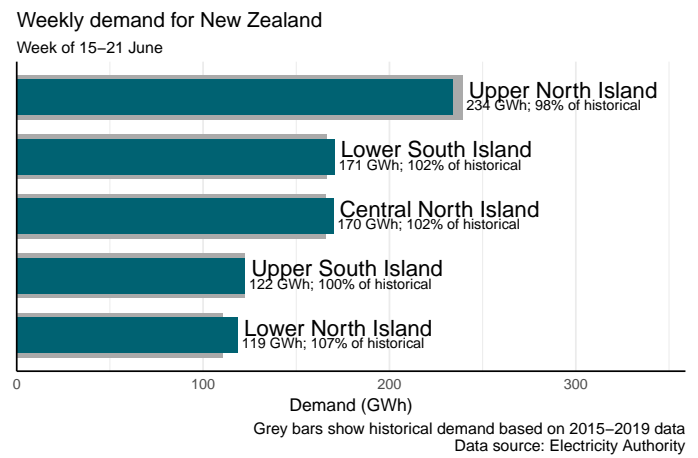
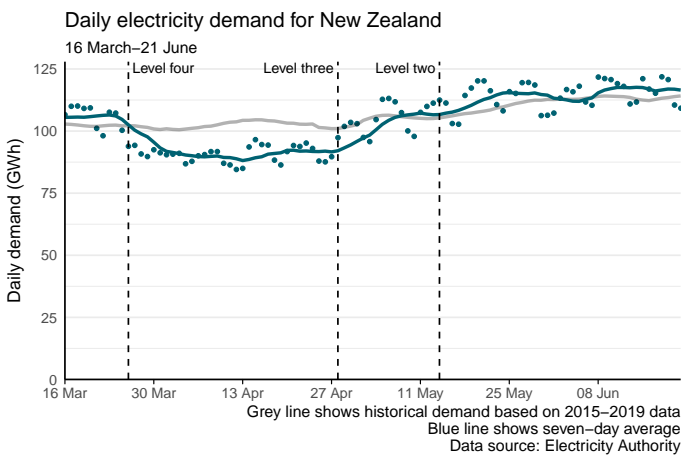
Weekly gas production:

112%

of historical production.

The analysis in this report is based on the last week, that is, activity during Level 1. New Zealand’s electricity demand and gas production have recovered to pre-lockdown levels. Fuel sale volumes continue to recover, although are yet to reach pre-lockdown levels.

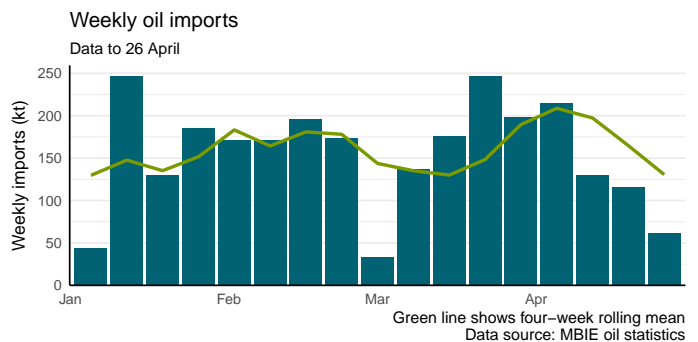
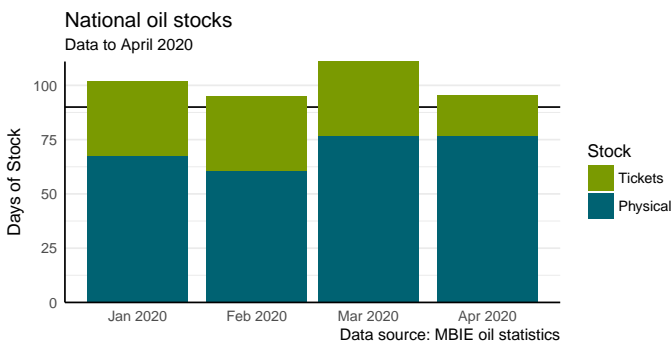
Electricity demand



New Zealand’s electricity demand for the week was **816 gigawatt-hours**, a decrease of 1 per cent on the previous week’s demand.

National electricity demand sits at 102 per cent of historical levels for this time of the year. In comparison, electricity demand averaged 89 per cent of historical levels during alert level four.

Oil stocks

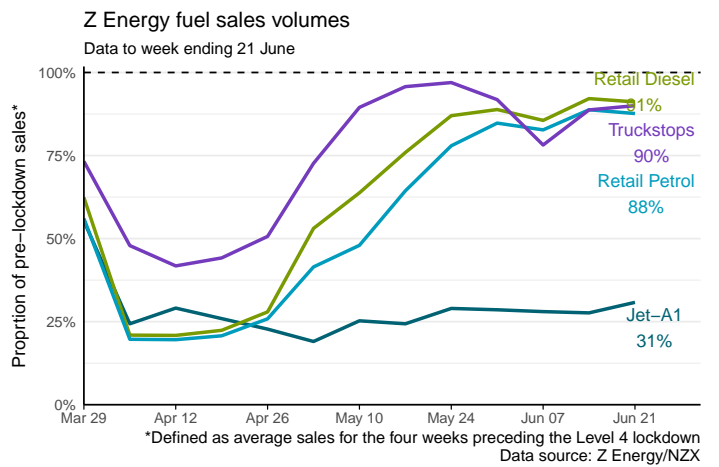
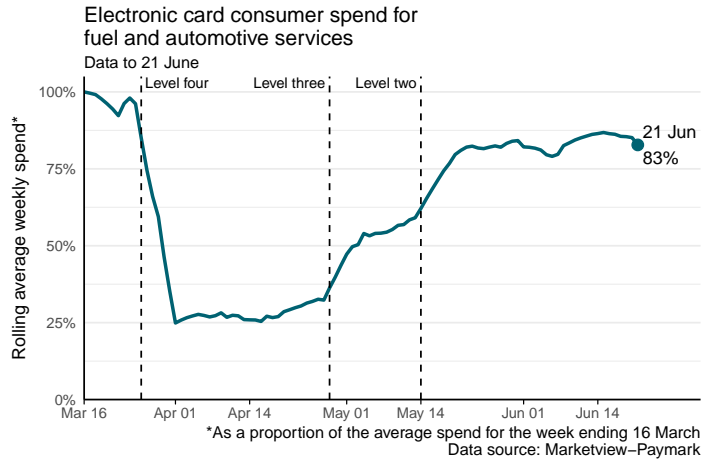
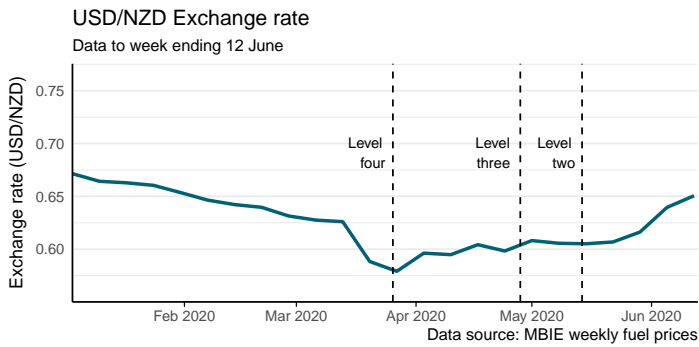
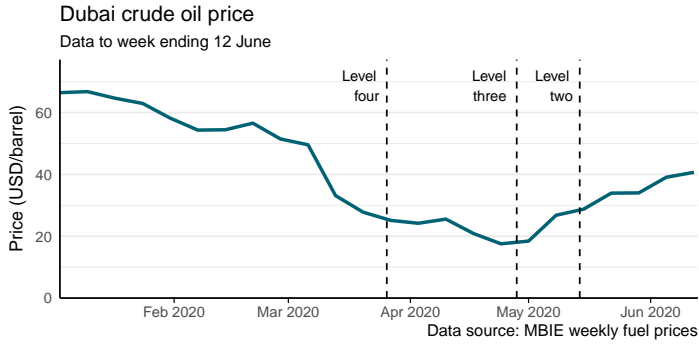
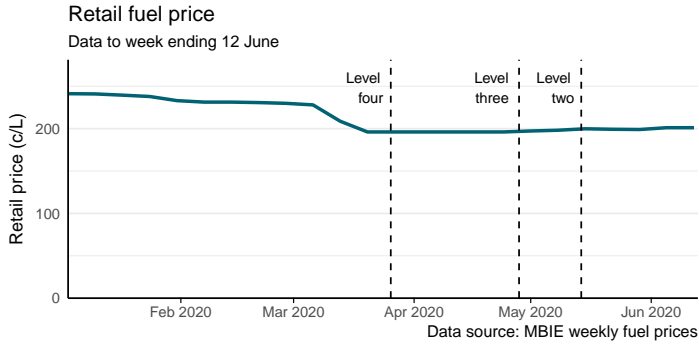


New Zealand continues to maintain oil stocks, both physical and in tickets, to ensure the country has access to at least ninety days of net oil imports.

April saw a decline in oil imports due to reduced demand for oil products during alert levels 4 and 3.



Retail fuel



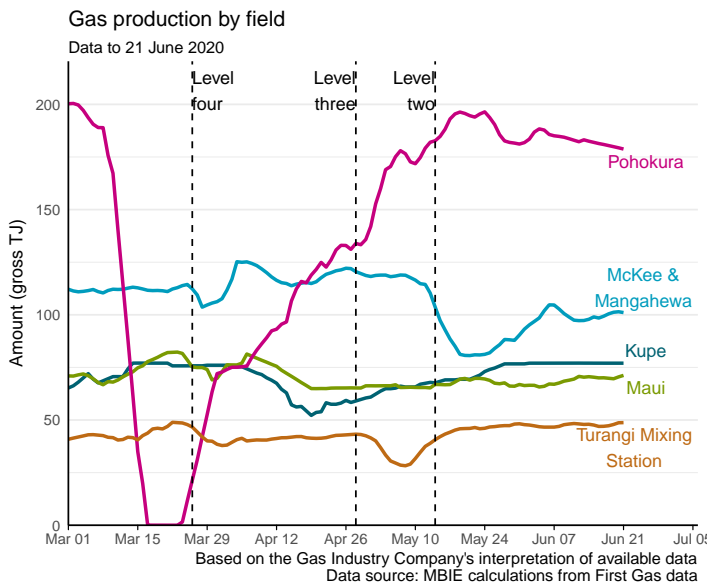
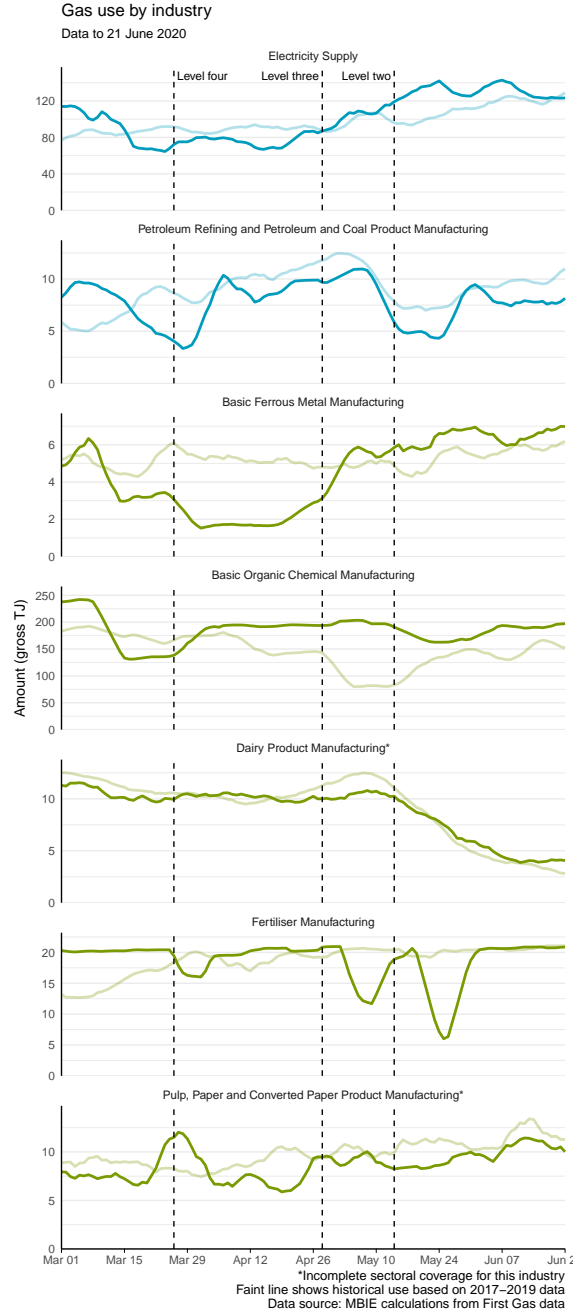
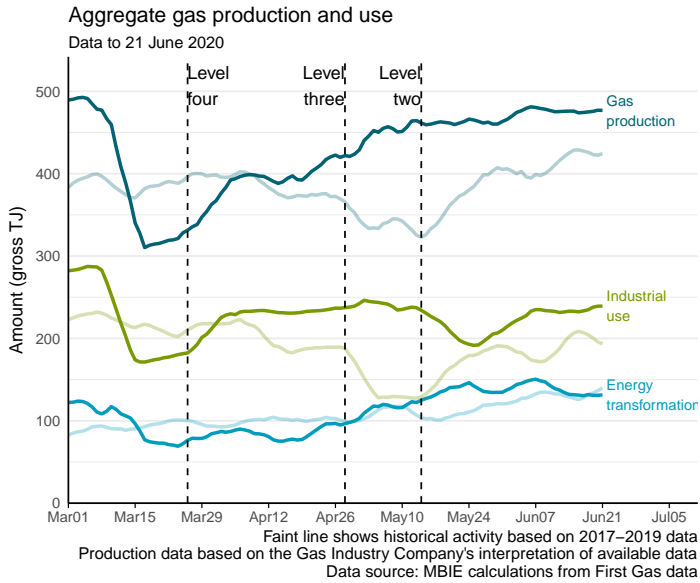
Consumer spending on fuel and automotive services has increased since the start of Level 1. However it is still down 14 per cent on pre Level 4 spending (taken as the week of 16 March).

The most recent Z Energy data shows no major change in commercial, retail and truckstop sales. In contrast jet fuel sales have slightly increased as of the last week.

The price of Dubai crude continued to increase, up slightly on the previous week.



Gas production and use



Gas production, transformation and use have kept relatively steady over the past week.

It should be noted that the historical average includes 2018, which saw reductions in production and use for both planned and unplanned reasons. In particular, the Pohokura field reduced production from May to July due to an outage, and Methanex completed a maintenance shutdown at its Motonui facility over this period which reduced use by the Basic Organic Chemical Manufacturing industry.



Data sources and glossary

Electricity demand data

Electricity demand data is taken from the Electricity Authority's Electricity Market Information¹ website. Historical demand is calculated based on data for the period 2015–2019. We use final pricing (ie. non-reconciled) data to calculate demand, and compare against final pricing data for previous years to ensure internal consistency in our comparisons. Half-hourly demand data is smoothed using a rolling mean, to de-emphasise outliers (which are generally assumed to be artefacts of the non-reconciled data). Daily demand is calculated as a seven-day average, to remove weekly seasonal effects.

Half-hourly demand data is compared against data from the same day of the week. Daily data is compared against seven-day average demand from the same day of previous years.

The Electricity Authority divides New Zealand into five zones for measurement purposes. These zones (and the regions they cover) are:

- Upper North Island (Northland and Auckland)
- Central North Island (Waikato, Bay of Plenty, Gisborne, central and northern Hawke's Bay, northern Manawatu-Wanganui)
- Lower North Island (Taranaki, central and southern Manawatu-Wanganui, southern Hawke's Bay, Wellington)
- Upper South Island (Marlborough, Tasman, Nelson, West Coast, central and northern Canterbury)
- Lower South Island (southern Canterbury, Otago, Southland)

Oil data

Oil stock and import data is taken from the MBIE oil statistics tables, which in turn are derived from data provided by Coastal Oil Logistics Limited, Refining NZ, and all major fuel importers. According to New Zealand's international energy programme treaty with the International Energy Agency, we are required to hold oil stocks equivalent to at least 90 days of our prior year's daily net oil imports. We hold these stocks in both physical product and tickets. Tickets are agreements with external parties to import oil at a fixed price.

Fuel price data

Weekly retail fuel price, Dubai crude oil price, and exchange rate data are taken from MBIE's weekly fuel price statistics.

Electronic card transaction spend data

Electronic card transaction (ECT) spend data is provided by MarketView, and is based on electronic card transaction data processed by Paymark, one of the two major electronic transaction companies in New Zealand. It covers approximately sixty per cent of electronic card transactions processed in New Zealand, and excludes cash spending, direct online bank transactions, and payments made via alternative payment networks (such as other electronic transaction companies). This data should be treated as indicative of trends in retail spend, rather than an absolute figure.

Daily values are calculated using a rolling seven-day average spend, to account for weekly seasonal effects. These values are compared against a nominal "pre-lockdown" level, defined as the week ending 16 March 2020. Spend data includes all transactions made at businesses categorised as "fuel and automotive": this means that, for example, food products purchased at service stations will also appear in this category.

If you are interested in looking further into this data please view the MBIE card spend dashboard at https://mbienz.shinyapps.io/card_spend_covid19/.

Z fuel sales data

Fuel sales data for Z Energy Limited is based on figures reported by Z Energy on the New Zealand Exchange. Expected levels are based on the average volume for the four weeks preceding the Level 4 lockdown, specifically Monday 24 February to Sunday 22 March 2020.

It is important to note that there is seasonal variation in fuel sales. This means that comparisons with pre Level 4 lockdown sales need to be treated with caution.

Gas data

Gas data is calculated based on data sourced from First Gas, and covers both production for six of the largest gas fields in New Zealand, and use by large-scale industrial consumers.

Gas production data covers production from Pohokura, McKee & Mangahewa, Maui, Turangi Mixing Station, and Kupe fields.

¹<http://emi.ea.govt.nz/>



Industrial and energy transformation use are reported for a number of large-scale industrial consumers in a number of energy-intensive industries, but this does not cover all industrial gas use, nor does this measure include residential use. Natural gas is only available in the North Island.

It is also important to note that gas use data is based on deliveries. This means that for some industries it is not directly comparable with MBIE's sectoral gas consumption statistics as this can include non-energy use or energy transformation (eg. electricity generation) use, which is reported elsewhere in the energy balances reporting framework used by MBIE.

