

NEWS: MARCH 2020

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POWER 5

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Wednesday 1 April, 2020



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John Hancock

What sort of car should I buy? (13)

This is an interesting read about the carbon footprint of a EV battery for anyone considering an EV.

<https://www...>
Eyes open

What sort of car should I buy? (13)

I suspect it may be up for sale to help cover the cost of moving...

Malcolm

Forecasting power demand under the lockdown (2)

Hi Marlov, although we're seeing weekday demand at a typical Sunday level, there is a distinct shape difference between...

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Updated to include comment from Meridian Energy chief executive Neal Barclay.

Joshua Riddiford

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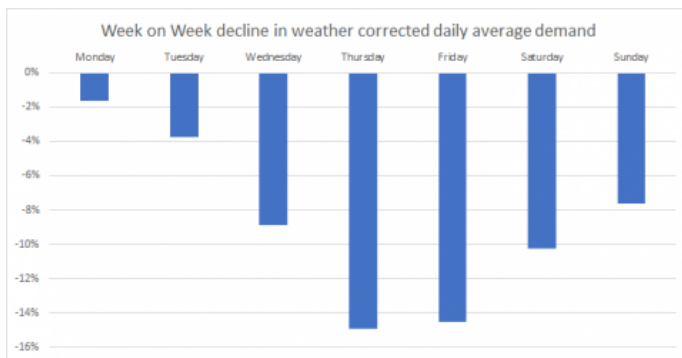
Forecasting power demand under the lockdown

Mark Todoroff - Tue, 31 Mar 2020

Power demand began to drop almost immediately after Prime Minister Jacinda Ardern announced a four-week lockdown last week as employees began packing up and leaving the workplace.

To quantify the effect of the lockdown on New Zealand's power demand, TESLA has normalised our series to remove weather's effect on load.

The chart below shows the percentage decline in weather-corrected daily average demand from the previous week.



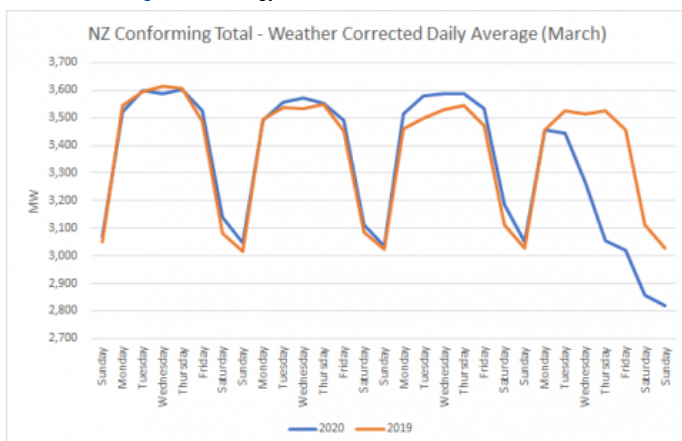
In full lockdown, we're seeing a 15 per cent drop in weekday power demand.

On Saturday, there's no sport, pubs or shopping so we're seeing a 10 per cent drop in demand.

On Sunday, we're seeing an 8 per cent drop.

The week-on-week percentage drop for Sunday is the lowest as many businesses are already closed on Sunday.

The graphs below show March 2020's daily average and peak weather-corrected demand compared to 2019's. All weather-corrected demand is calculated using TESLA Forecasting's methodology.



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Lockdown will minimise economic pain

Steve Rotherham

The Covid-19 recession has begun. With the country entering a four-week lockdown, there can be no doubt that the March and June quarters will register significant economic contraction.



Just one measure alone – school closures lasting four weeks – could cut 3 per cent from GDP, according to research put before the UK Government.

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Pandemic Watch

NZ Government website: covid19.govt.nz Coronavirus alert system: What you need to know (RNZ) [Tracking case numbers](#)



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Energy Resource Factfile

Tauhara

Geothermal power station



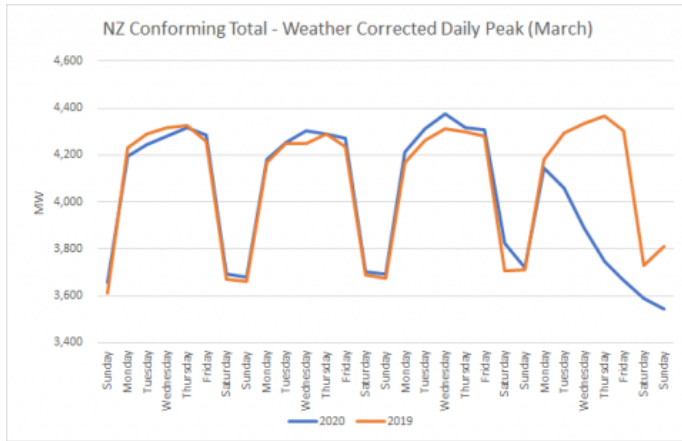
Capacity 250.00MW

Ownership Contact Energy



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Note: This is an aggregation of demand at all conforming grid exit points in New Zealand.

What's TESLA doing to adjust our demand forecasts?

The first thing we did was modify the school holiday variables to account for school closures from Tuesday last week onward. Now that we're in full lockdown, we've also moved all weekdays for the next four weeks into our Sunday model.

Although weekday lockdown demand is around the Sunday level, there is an earlier morning ramp up as people wake up earlier during the week when they work from home. We're adjusting the weekday lockdown shape to account for this.

The upcoming Easter holiday weekend and shift from daylight saving

There's typically more uncertainty in demand forecasting around the time change. Not only does the temporal alignment shift by one hour, but we're also transitioning from cooling to heating demand.

To further complicate things we also have the effect of the four-day Easter weekend coming up. In a typical year, people take advantage of this extra-long weekend and go on holiday.

Unfortunately, that won't be the case this year. So TESLA Forecasting must suppress Easter's effect on load and treat those holidays as typical lockdown level non-working days.

Mark Todoroff is Business Development Director at TESLA Asia Pacific.

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Marlov
Tue, 31
Mar
2020

Hi Mark, thanks for the

Hi Mark, thanks for the update. "there is an earlier morning ramp up as people wake up earlier during the week when they work from home"... What's the reason for this do you think? I'm just curious because intuitively I would have expected the exact opposite. When people don't have to commute, they can afford to wake up later to start work from home.

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Mark
Todoroff
Tue, 31
Mar 2020

Hi Marlov, although we're

Hi Marlov, although we're seeing weekday demand at a typical Sunday level, there is a distinct shape difference between weekday lockdown and the typical Sunday demand profile. Specifically, weekday lockdown demand has a steeper morning ramp up than a typical Sunday. That's because during the week people are waking up earlier to work from home. On the weekend, they are sleeping in. So for demand forecasting during this lockdown, we are not just forecasting all lockdown weekdays as Sundays, but are also adjusting for the weekday demand profile. Sorry for the confusion!

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Tina Schirr is open to new ideas and innovations, wherever they

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Tauhara

Geothermal power station



Location	Tauhara field, 5.5 kilometres north-east of Taupo
Status	Consented
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Organisation Factfile

Westpower



CEO	Rob Caldwell (until 31 March 2020), Peter Armstrong (From 1 April 2020)
Ownership	West Coast Electric Power Trust
Description	Distribution company
Operating resources	Amethyst River
Non-operating resources	Waitaha River
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