9 March 2026

ELECTRICITY AUTHORITY
TE MANA HIKO

Trading conduct report 1-7 March 2026

Market monitoring weekly report

Trading conduct report 1-7 March 2026

1. Overview

1.1. This week the average spot price increased by $24/MWh to $96/MWh. Slightly higher demand and an increase in geothermal outages have contributed to higher prices this week. The proportion of hydro and wind generation increased this week, while the proportion of geothermal and thermal generation decreased. National controlled hydro storage decreased this week to 88% nominally full and ~109% of the historical average for this time of year.

2. Spot prices

2.1. This report monitors underlying wholesale price drivers to assess whether trading periods require further analysis to identify potential non-compliance with the trading conduct rule. In addition to general monitoring, it also singles out unusually high-priced individual trading periods for further analysis by identifying when wholesale electricity spot prices are outliers compared to historic prices for the same time of year.

2.2. Between 1-7 March:

(a) The average spot price for the week was $96/MWh, an increase of around $24/MWh compared to the previous week.

(b) 95% of prices fell between $3/MWh and $151/MWh.

2.3. Prices are higher overall this week due to slightly higher demand and an increase in geothermal outages this week.

2.4. On Tuesday and Wednesday morning, prices spiked between $1,986-3,936/MWh at Fernhill and between $1,057-2,000/MWh at Tuai due to lines constraints in the Hawke's Bay region. The monitoring team is looking into these prices further.

2.5. Prices also spiked between $176-213/MWh at Ōtāhuhu on Tuesday, Wednesday and Thursday mornings.

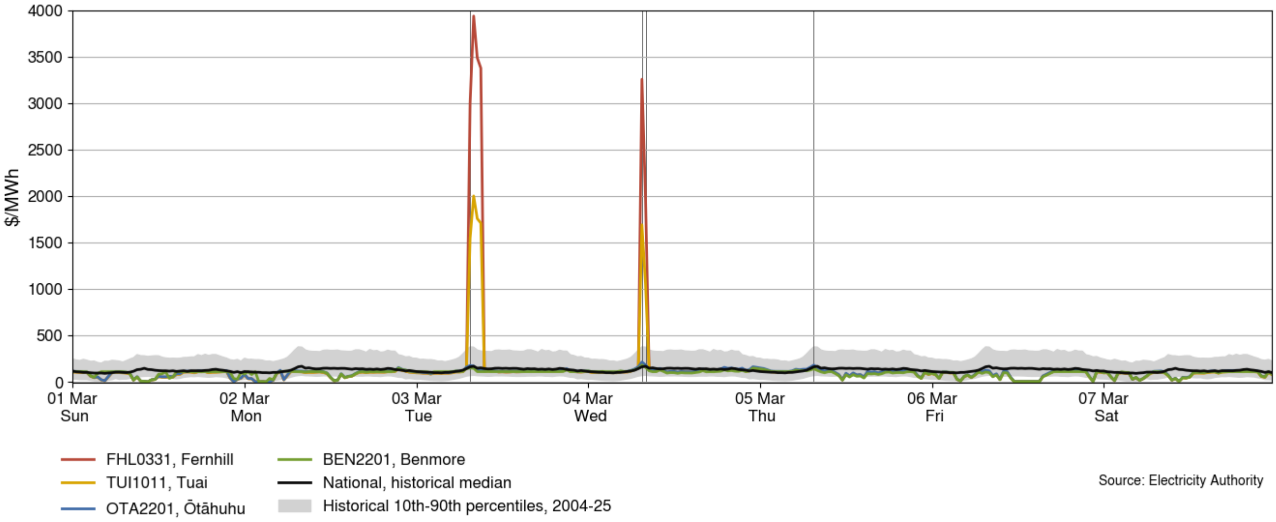
(a) Tuesday morning experienced the highest demand of the week. Demand was also up to 151MW higher than forecast at this time.

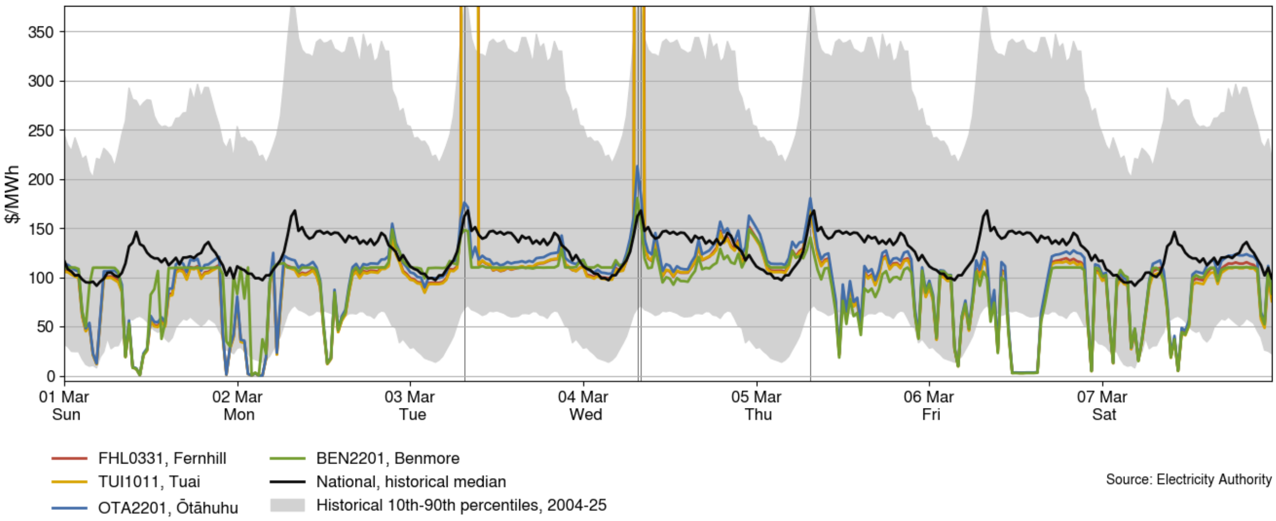
(b) On Wednesday and Thursday, low wind generation coincided with morning peak demand. Demand was between 25-124MW higher than forecast on both days, with intermittent generation between 40-47MW lower than forecast on Wednesday only.

2.6. South Island price separation occurred at times between Sunday and Monday morning. South Island reserve price spikes during the annual HVDC Pole 2 outage contributed to some of this price separation. Other separation occurred when the HVDC was operating near its minimum level.

2.7. Figure 1 shows the wholesale spot prices at Benmore, Ōtāhuhu, Fernhill and Tuai alongside the national historic median and historic 10-90th percentiles adjusted for inflation. Prices greater than quartile 3 (75th percentile) plus 1.5 times the inter-quartile range of historic prices, plus the difference between this week's median and the historic median, are highlighted with a vertical black line. Other notable prices are marked with black dashed lines.

Figure 1: Wholesale spot prices at Benmore, Ōtāhuhu, Fernhill and Tuai, 1-7 March

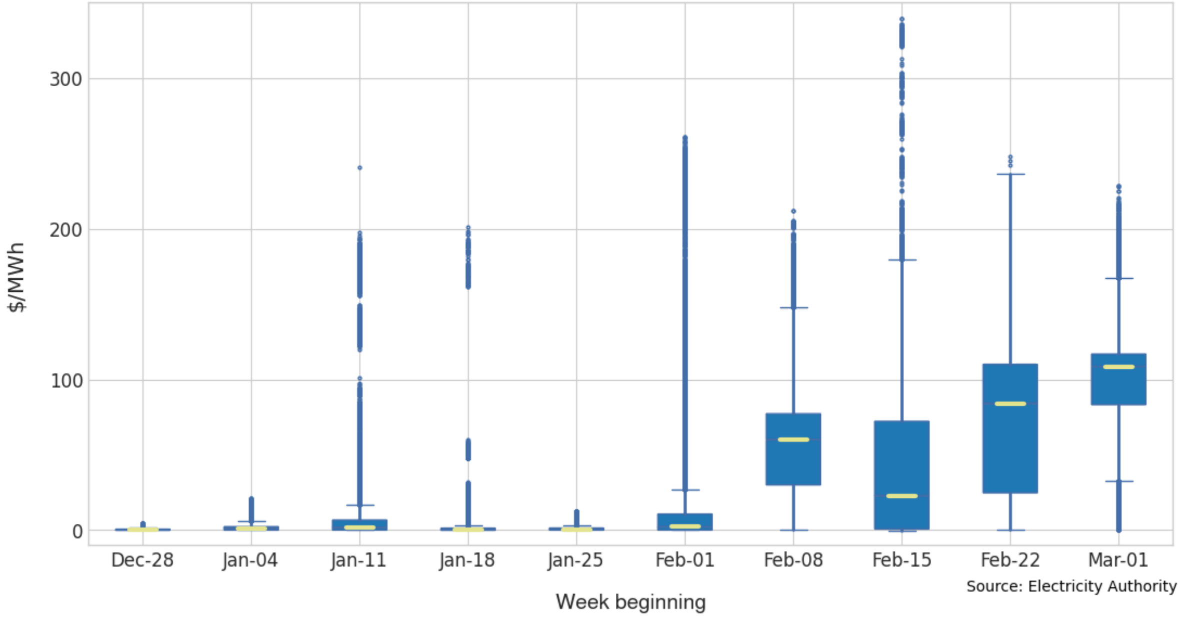




2.8. Figure 2 shows a box plot with the distribution of spot prices during this week and the previous nine weeks. The yellow line shows each week's median price, while the blue box shows the lower and upper quartiles (where 50% of prices fell). The 'whiskers' extend to points that lie within 1.5 times of the interquartile range (IQR) of the lower and upper quartile. Observations that fall outside this range are displayed independently.

2.9. The distribution of spot prices this week was narrower compared to the previous week. The median price was $109/MWh and most prices (middle 50%) fell between $83/MWh and $117/MWh.

Figure 2: Box plot showing the distribution of spot prices this week and the previous nine weeks

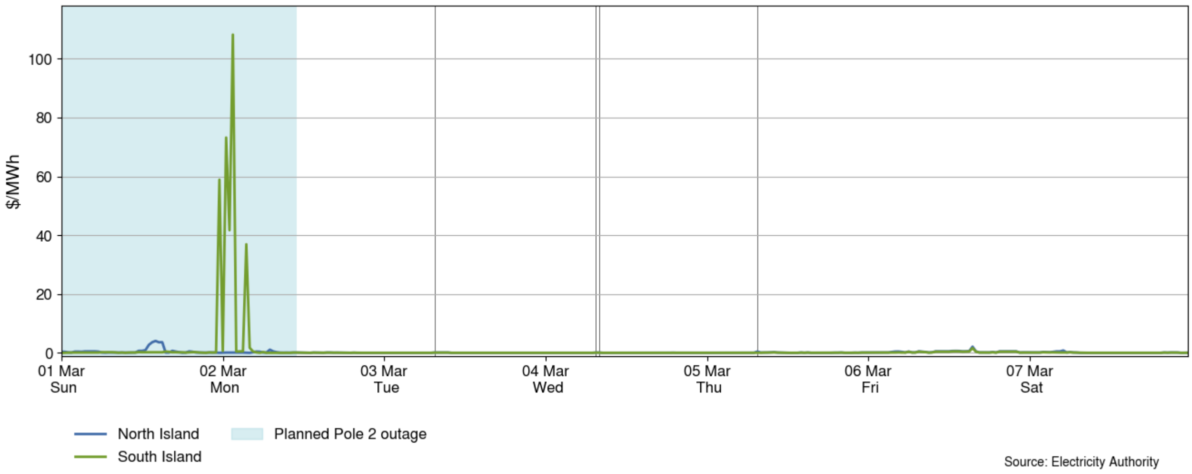


3. Reserve prices

3.1. Fast instantaneous reserve (FIR) prices for the North and South Islands are shown below in Figure 3. FIR prices were mostly below $5/MWh this week, aside from South Island price spikes during the planned HVDC Pole 2 outage on Sunday and Monday.

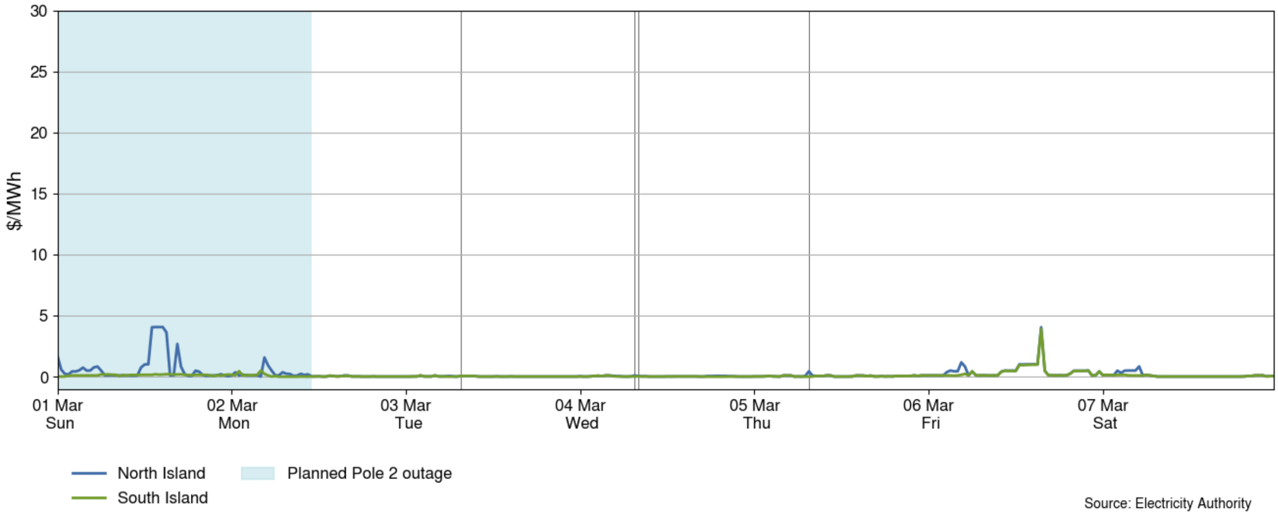
3.2. South Island SIR prices spiked up to $108/MWh between 11.30pm on Sunday to 3.30am on Monday. The HVDC was setting the risk during this time.

Figure 3: Fast instantaneous reserve price by trading period and island, 1-7 March



3.3. Sustained instantaneous reserve (SIR) prices for the North and South Islands are shown in Figure 4. SIR prices across both the North and South Islands remained below $5/MWh this week.

Figure 4: Sustained instantaneous reserve by trading period and island, 1-7 March



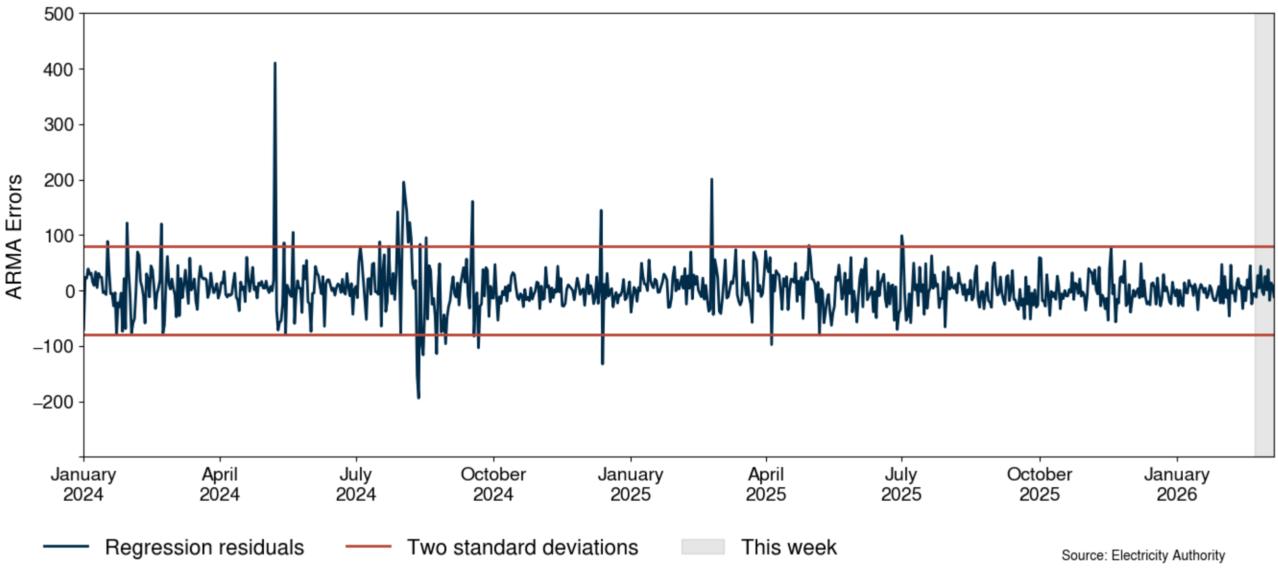
4. Regression residuals

4.1. The Authority's monitoring team uses a regression model to model electricity spot prices. The residuals show how close predicted spot prices were to actual prices. Large residuals may indicate that prices do not reflect underlying supply and demand conditions. Details on the regression model and residuals can be found in Appendix A.

4.2. Figure 5 shows the residuals of autoregressive moving average (ARMA) errors from the daily model. Positive residuals indicate that the modelled daily price is lower than the actual average daily price and vice versa. When residuals are small this indicates that average daily prices are likely largely aligned with market conditions. These small deviations reflect market variations that may not be controlled in the regression analysis.

4.3. This week, there were no residuals above or below two standard deviations, indicating that prices were similar to those predicted by the model.

Figure 5: Residual plot of estimated daily average spot prices, 1 January 2024 - 7 March 2026



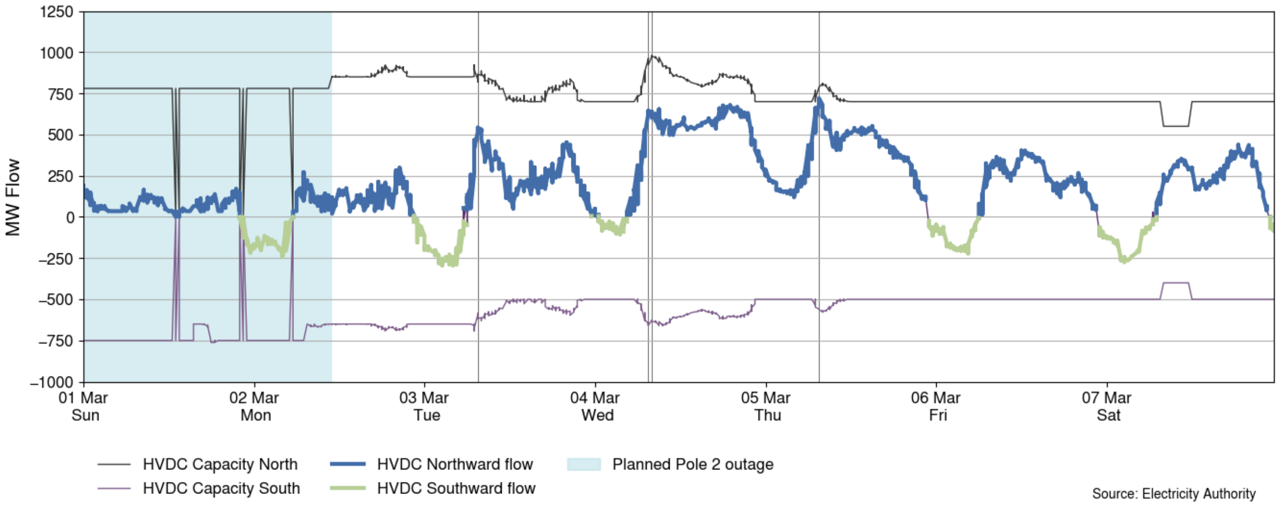
5. HVDC

5.1. Figure 6 shows the HVDC flow between 1-7 March. HVDC flows were mostly northward during the day and often southward overnight this week.

5.2. The planned HVDC Pole 2 outage ended this week on Monday at 11.00am,[1] although other asset outages continue to limit HVDC transfer.

5.3. The highest northward flow occurred at 7.30am on Thursday with a flow of 721MW.

Figure 6: HVDC flow and capacity, 1-7 March



6. Demand

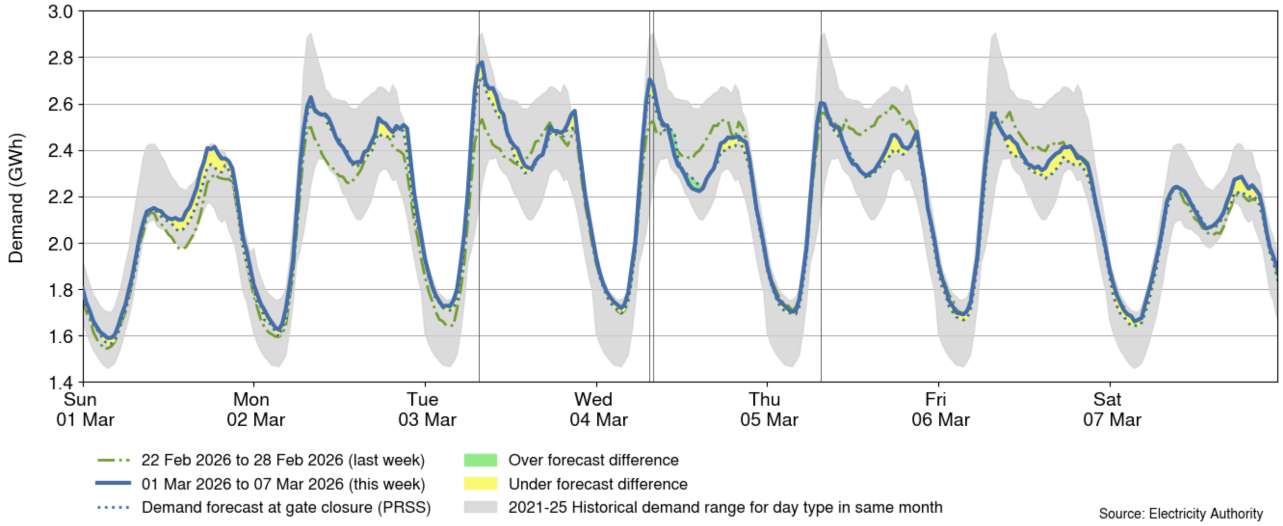
6.1. Figure 7 shows national demand between 1-7 March, compared to the historic range and the demand of the previous week.

6.2. Demand was mostly similar or higher compared to the previous week between Sunday and Wednesday morning, with low temperatures likely contributing to this. For the rest of the week, demand was similar or lower compared to the previous week.

6.3. The highest demand of the week was around 2.78GWh at 8.00am on Tuesday.

[1] CAN Planned Outage HVDC Pole 2, HVDC Pole 3 7187559573.pdf

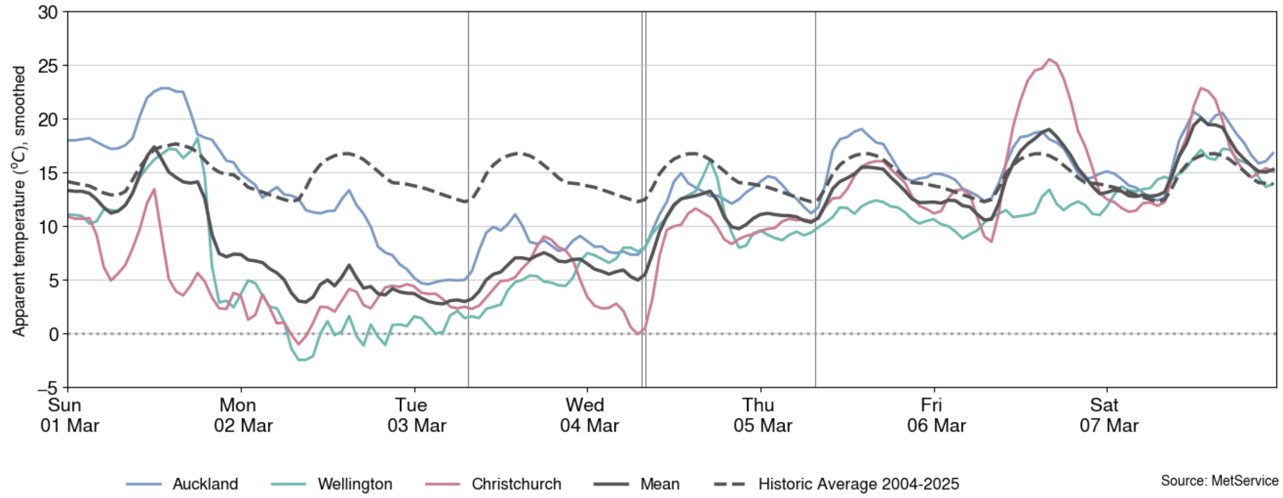
Figure 7: National demand, 1-7 March compared to the previous week



6.4. Figure 8 shows the hourly apparent temperature at main population centres from 1-7 March. The apparent temperature is an adjustment of the recorded temperature that accounts for factors like wind speed and humidity to estimate how cold it feels. Also included for reference is the mean temperature of the main population centres, and the mean historical apparent temperature of similar weeks, from previous years, averaged across the three main population centres.

6.5. Apparent temperatures ranged from 5°C to 23°C in Auckland, -3°C to 19°C in Wellington, and -2°C to 26°C in Christchurch.

Figure 8: Temperatures across main centres, 1-7 March



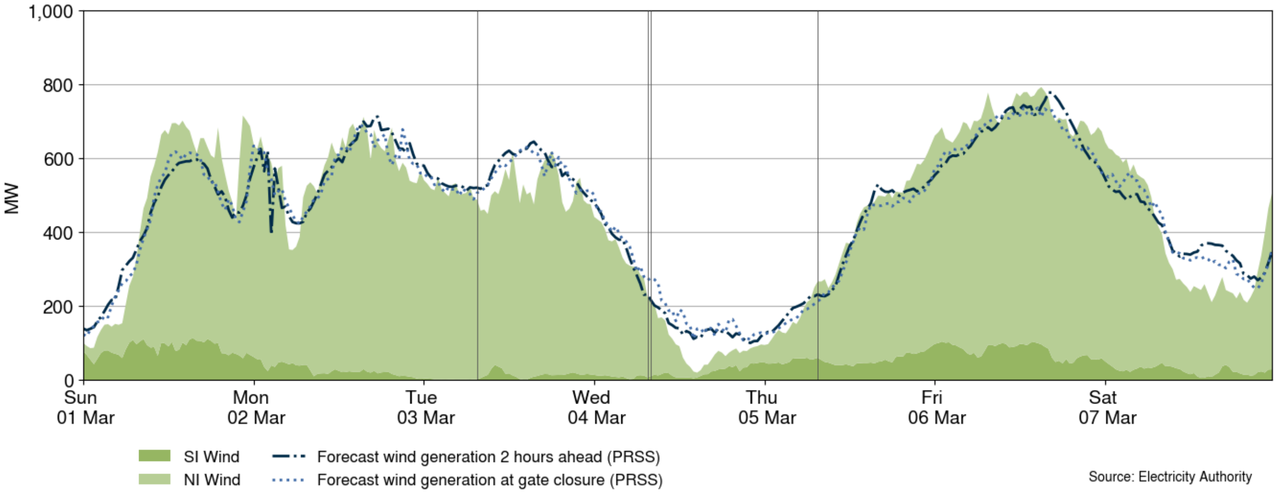
7. Generation

7.1. Figure 9 shows wind generation and forecast from 1-7 March. This week wind generation varied between 20MW and 793MW, with a weekly average of 454MW.

7.2. Wind generation increased on Sunday, remaining mostly above 400MW until Wednesday, where generation dropped well below 200MW. Wind generation increased from Thursday but declined again on Saturday.

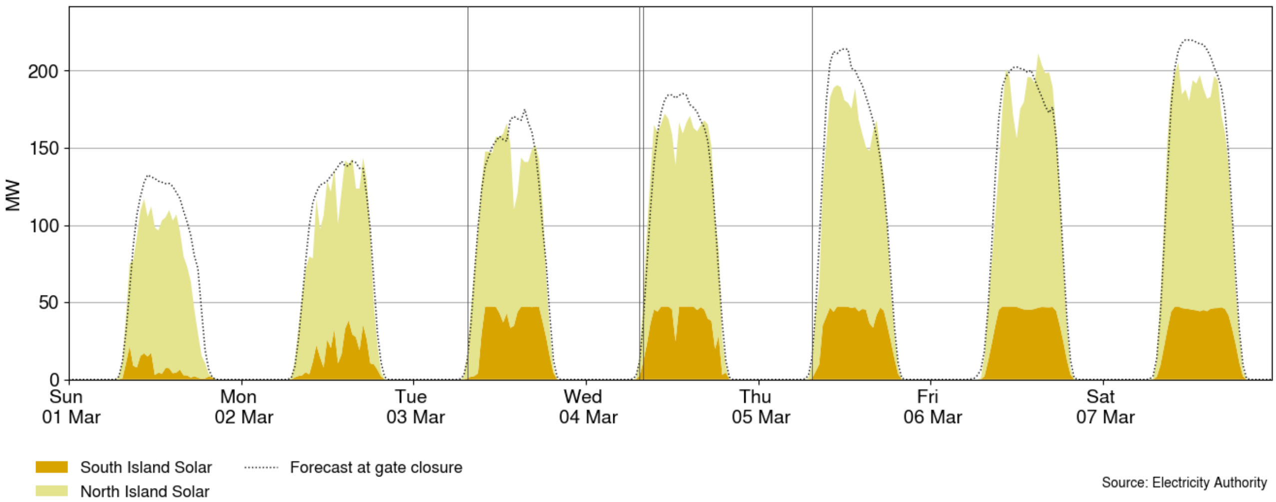
7.3. Wind forecasting errors on Wednesday and Saturday are the result of an amalgamation of errors across multiple wind farms.

Figure 9: Wind generation and forecast, 1-7 March



7.4. Figure 10 shows grid connected solar generation from 1-7 March. Solar generation increased over the course of the week. On Sunday, generation reached a daily maximum of only 117MW, while a maximum of 211MW occurred on Friday at 3.00pm.

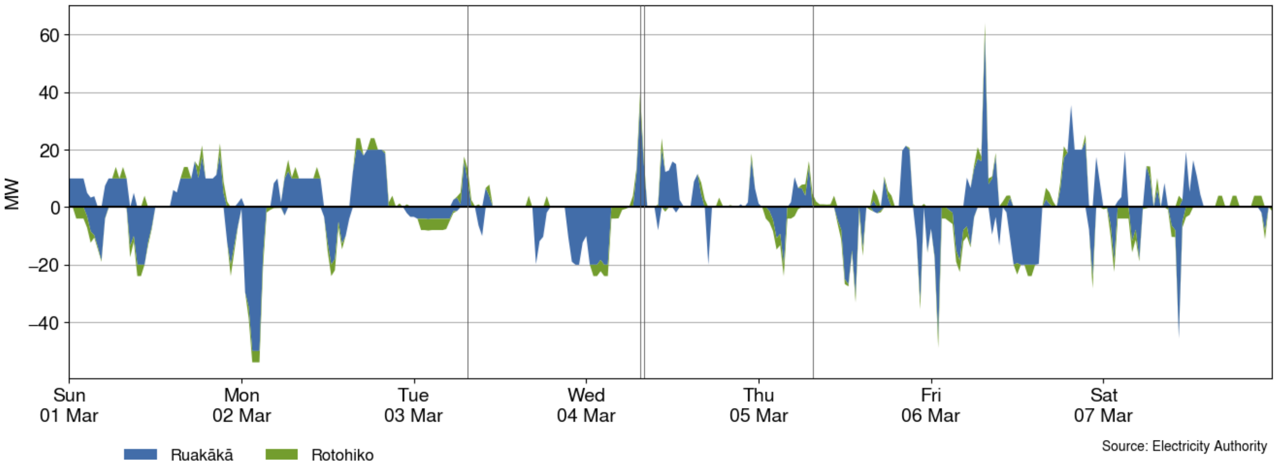
Figure 10: Grid connected solar generation, 1-7 March



7.5. Figure 11 shows when the grid scale batteries Rotohiko (35MW/35MWh) and Ruakākā (100MW/200MWh) charged (negative values) and discharged (positive values). Typically, a grid scale battery charges when prices are low and discharges energy back into the grid when prices are higher.

7.6. This week the batteries mostly charged during relatively lower prices during the day or overnight. The batteries mostly discharged when prices were higher during the day. The Ruakākā battery did not discharge much during Tuesday's or Thursday's high prices, likely due to lack of charge.

Figure 11: Grid scale battery charge and discharge, 1-7 March



7.7. Figure 12 shows the difference between the national real-time dispatch (RTD) marginal price and a simulated marginal price where the real-time intermittent generation and demand matched the 1-hour ahead forecast (PRSS[2]) projections. The figure highlights when forecasting inaccuracies are causing large differences to final prices. When the difference is positive this means that the 1-hour ahead forecasting inaccuracies resulted in the spot price being higher than anticipated - usually here demand is under forecast and/or intermittent generation is over forecast. When the difference is negative, the opposite is true. Because of the nature of demand and intermittent generation forecasting, the 1-hour ahead and the RTD intermittent generation and demand forecasts will rarely be the same. Trading periods where this difference is exceptionally large can signal that forecasting inaccuracies had a large impact on the final price for that trading period.

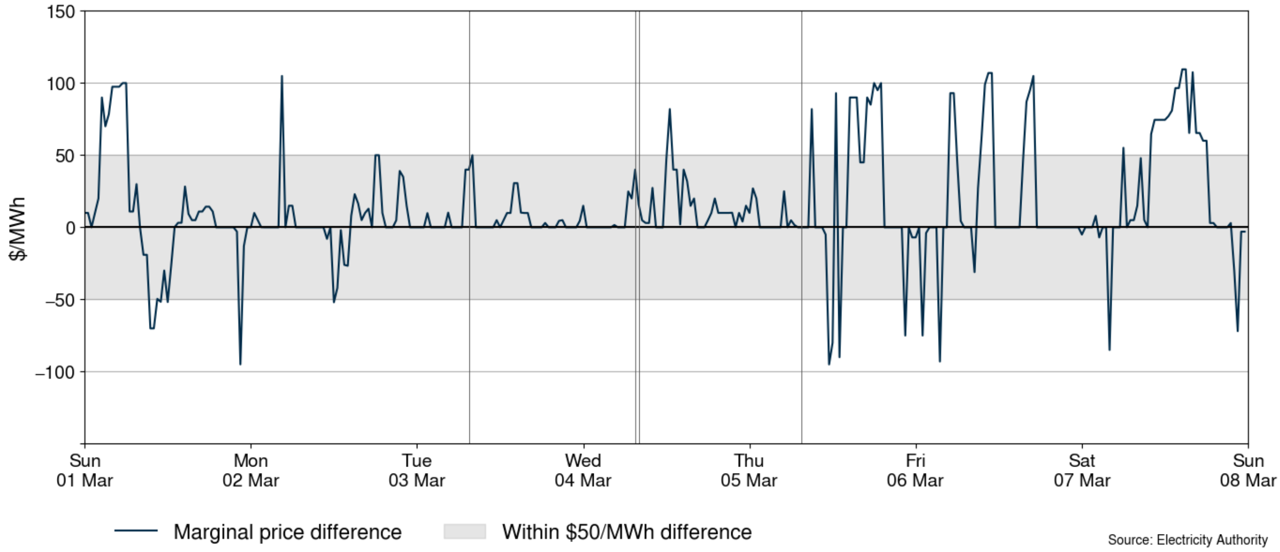
7.8. Several trading periods this week had price differences of more than $50/MWh.

7.9. The maximum positive difference of $110/MWh occurred on Saturday at 2.30pm. At this time, demand was 25MW higher than forecast and intermittent generation was 125MW lower than forecast.

7.10. The maximum negative difference of $95/MWh occurred on Thursday at 11.30am. At this time, demand was 46MW lower than forecast and intermittent generation was 29MW higher than forecast.

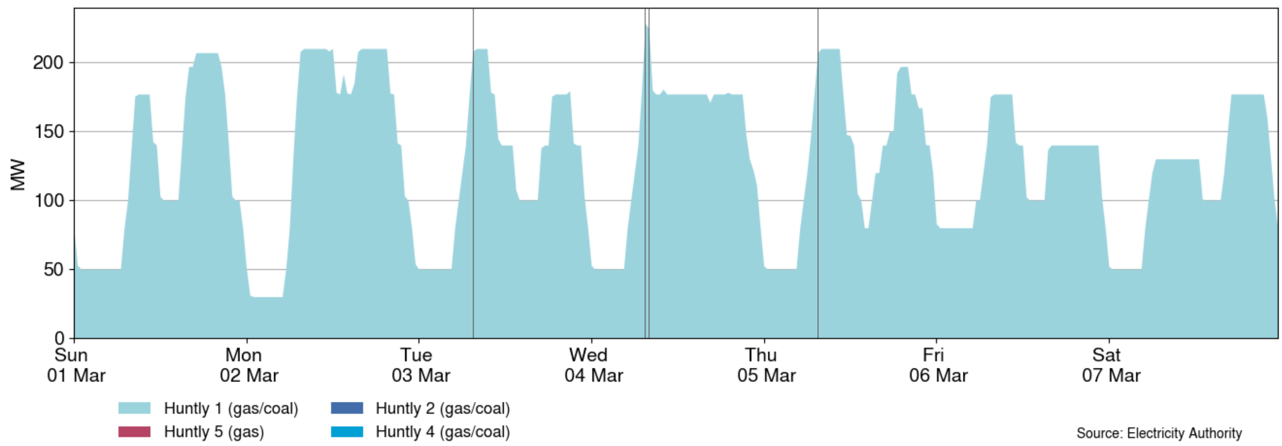
[2] Price responsive schedule short – short schedules are produced every 30 minutes and produce forecasts for the next 4 hours.

Figure 12: Difference between national marginal RTD price and simulated RTD price, with the difference due to one-hour ahead intermittent generation and demand forecast inaccuracies, 1-7 March



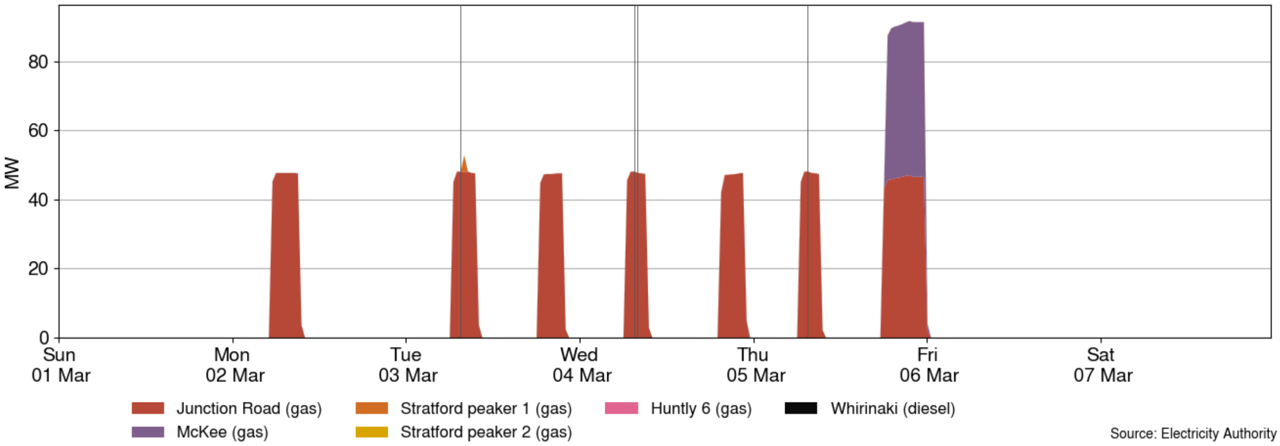
7.11. Figure 13 shows the generation of thermal baseload between 1-7 March. Huntly 1 ran continuously this week, generating more during the day and less overnight.

Figure 13: Thermal baseload generation, 1-7 March



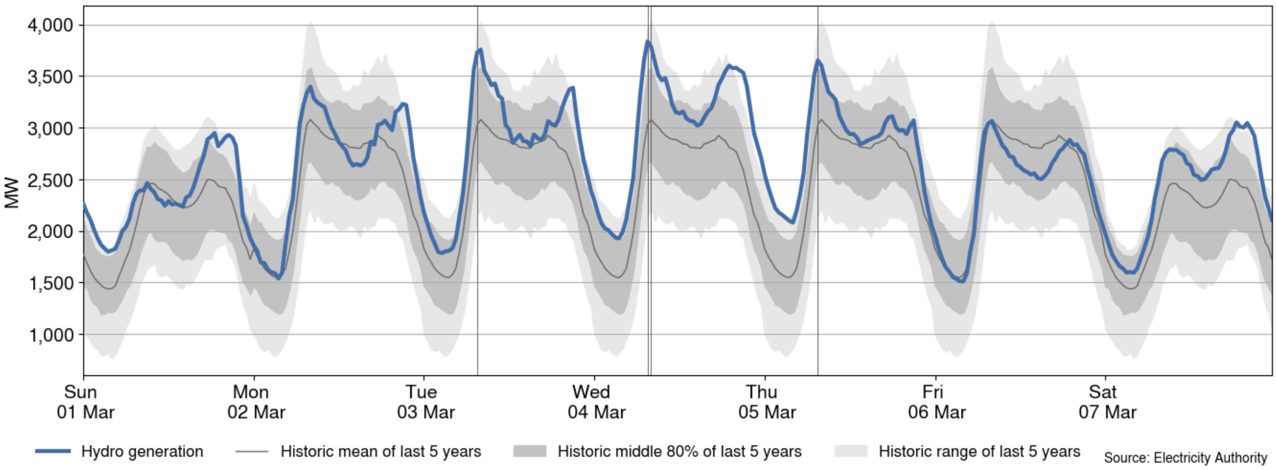
7.12. Figure 14 shows the generation of thermal peaker plants between 1-7 March. Junction Road ran during most morning and evening peaks between Monday and Thursday this week. Stratford peak 1 ran briefly on Tuesday morning and McKee ran on Thursday evening.

Figure 14: Thermal peaker generation, 1-7 March



7.13. Figure 15 shows hydro generation between 1-7 March. Hydro generation was mostly close to or above the historic mean this week. During periods of high wind and lower demand on Sunday, Monday and Friday, hydro generation dipped below the historic mean.

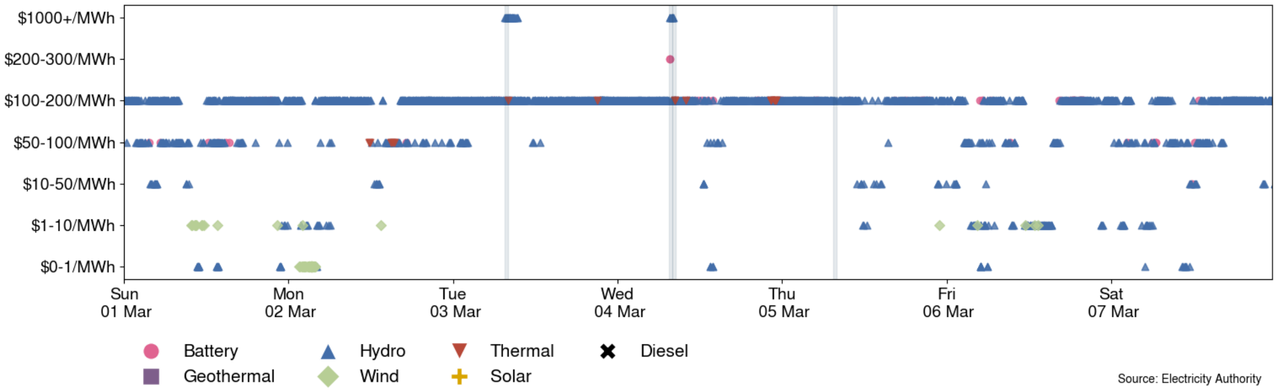
Figure 15: Hydro generation, 1-7 March



7.14. Figure 16 shows the distribution of marginal prices this week and what generation technology produced each marginal price. Note there can be multiple marginal plants for each 5-minute period.

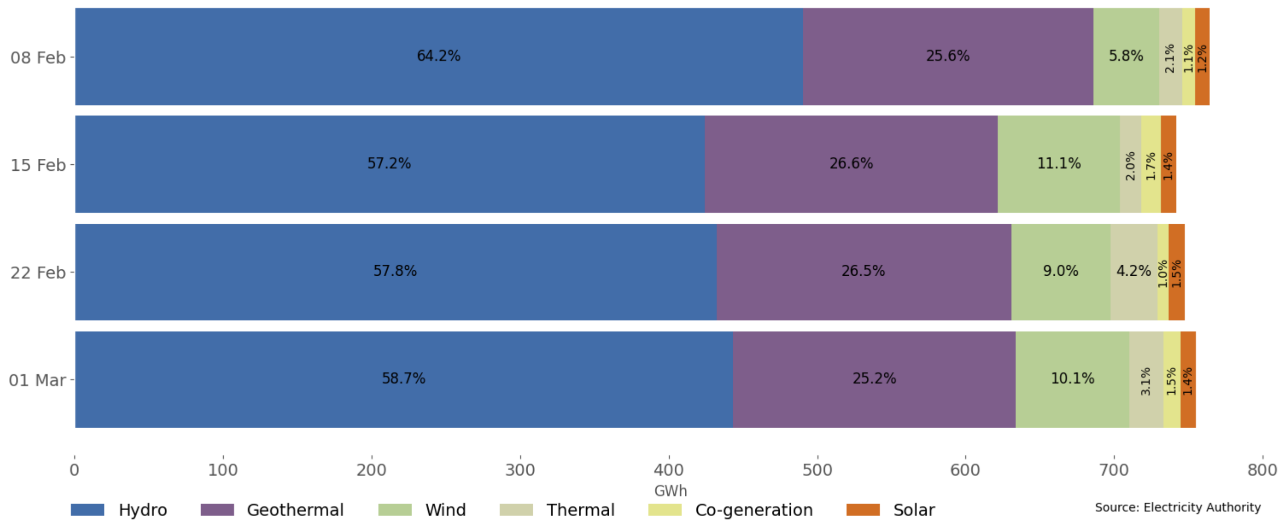
7.15. The highest prices were set by Genesis hydro on Tuesday and Wednesday. The most common technology setting prices this week was hydro generation, with wind generation the second most common. Most marginal prices were between $100-200/MWh.

Figure 16: Prices of marginal generation, 1-7 March



7.16. As a percentage of total generation, between 1-7 March, total weekly hydro generation was 58.7%, geothermal 25.2%, wind 10.1%, thermal 3.1%, co-generation 1.5%, and solar (grid connected) 1.4%, as shown in Figure 17.

Figure 17: Total generation by type as a percentage each week, between 8 February and 7 March



8. Outages

8.1. Figure 18 shows generation capacity on outage. Total capacity on outage between 1-7 March ranged between ~1,291MW and ~2,036MW. Figure 19 shows the thermal generation capacity outages.

Figure 18: Total MW loss from generation outages, 1-7 March

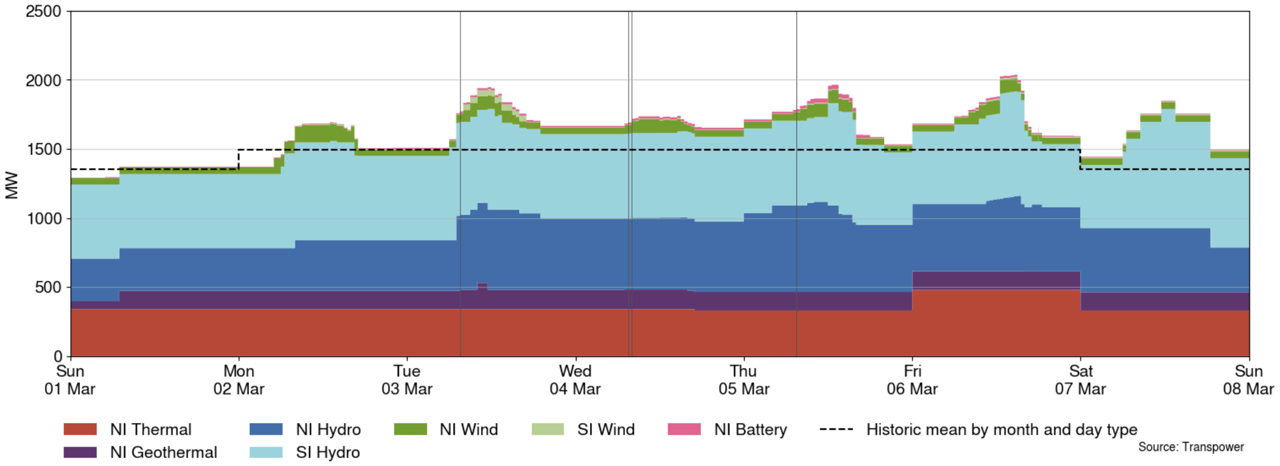
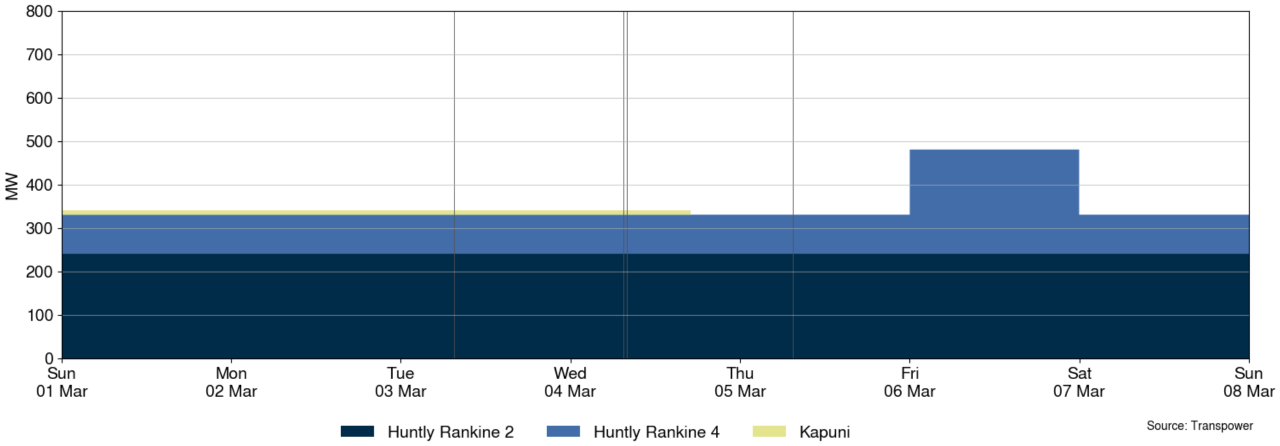


Figure 19: Total MW loss from thermal outages, 1-7 March



8.2. Notable outages include:

Plant	Partial or Full	End Date
Ōhau A	Partial	6 March 2026
Huntly 4	Partial/Full	10 March 2026
Roxburgh unit 5	Full	11 March 2026
Benmore unit 6	Full	13 March 2026
Rangipō unit 6	Full	29 March 2026
Benmore unit 5	Full	2 April 2026
Huntly 2	Full	28 April 2026
Clyde unit 2	Full	1 May 2026
Manapōuri unit 4	Full	12 June 2026
Roxburgh unit 8	Full	30 October 2026

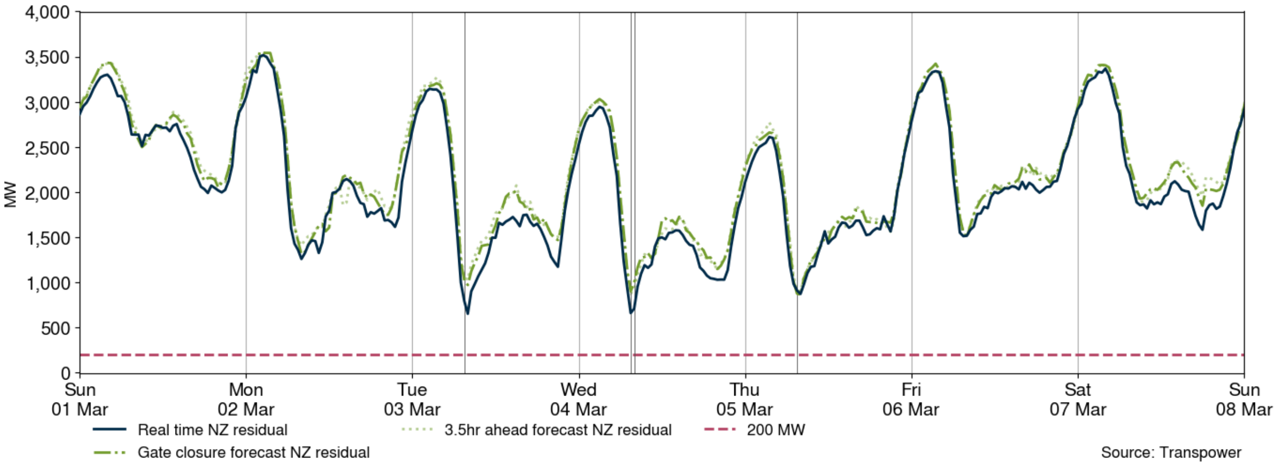
9. Generation balance residuals

9.1. Figure 20 shows the national generation balance residuals between 1-7 March. A residual is the difference between total energy supply and total energy demand for each trading period. The red dashed line represents the 200MW residual mark which is the threshold at which Transpower issues a customer advice notice (CAN) for a forecast low residual situation.

The green dashed line represents the forecast residuals and the blue line represents the real-time dispatch (RTD) residuals.

9.2. Overall, residuals were healthy this week. The lowest national residual was 653MW on Tuesday at 8.00am.

Figure 20: National generation balance residuals, 1-7 March



10. Storage/fuel supply

10.1. Figure 21 shows the total controlled national hydro storage as well as the storage of major catchment lakes including their historical mean and 10th to 90th percentiles.

10.2. As of 7 March, national controlled storage has decreased to 88% nominally full and ~109% of the historical average for this time of the year.

10.3. Storage at Lake Pūkaki (93% full[3]) is below its historic 90th percentile but remains above mean, while Lake Takapō (82% full) is now below its historic mean.

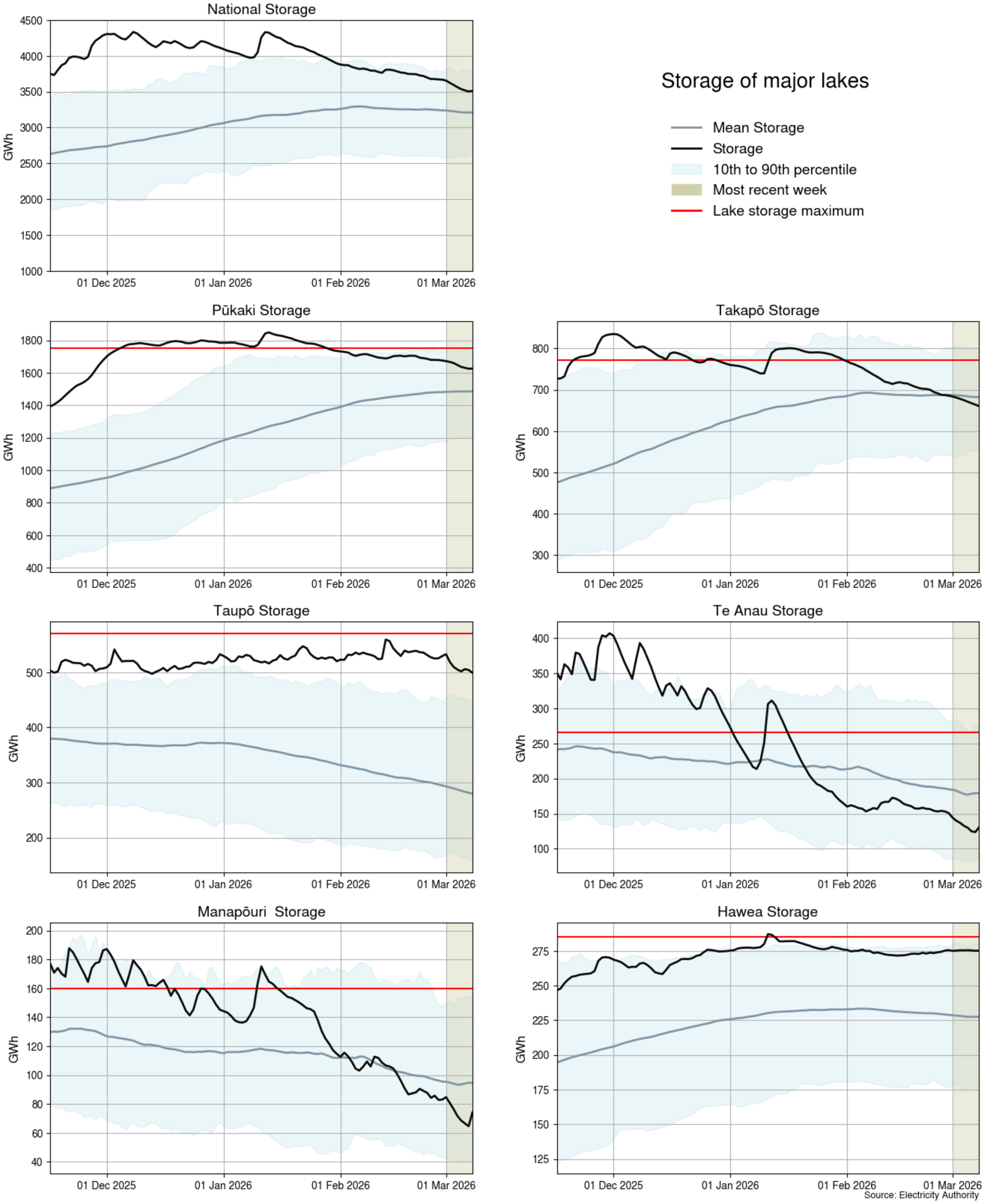
10.4. Storage at Lake Te Anau (49% full) is below its historic mean, with Lake Manapōuri (47% full) also below its historic mean.

10.5. Storage at Lake Taupō (87% full) remains above its historic 90th percentile for this time of year.

10.6. Storage at Lake Hawea (96% full) is close to its historic 90th percentile.

[3] Percentage full values sourced from NZX Hydro.

Figure 21: Hydro storage



11. Prices versus estimated costs

11.1. In a competitive market, prices should be close to (but not necessarily at) the short-run marginal cost (SRMC) of the marginal generator (where SRMC includes opportunity cost).

11.2. The SRMC (excluding opportunity cost of storage) for thermal fuels is estimated using gas and coal prices, and the average heat rates for each thermal unit. Note that the SRMC calculations include the carbon price, an estimate of operational and maintenance costs, and transport for coal.

11.3. Figure 22 shows an estimate of thermal SRMCs as a monthly average up to 1 February 2026. The SRMCs for gas-powered generation have increased, while the SRMC for diesel-fuelled generation has decreased. The SRMC for coal-fuelled generation has remained stable.

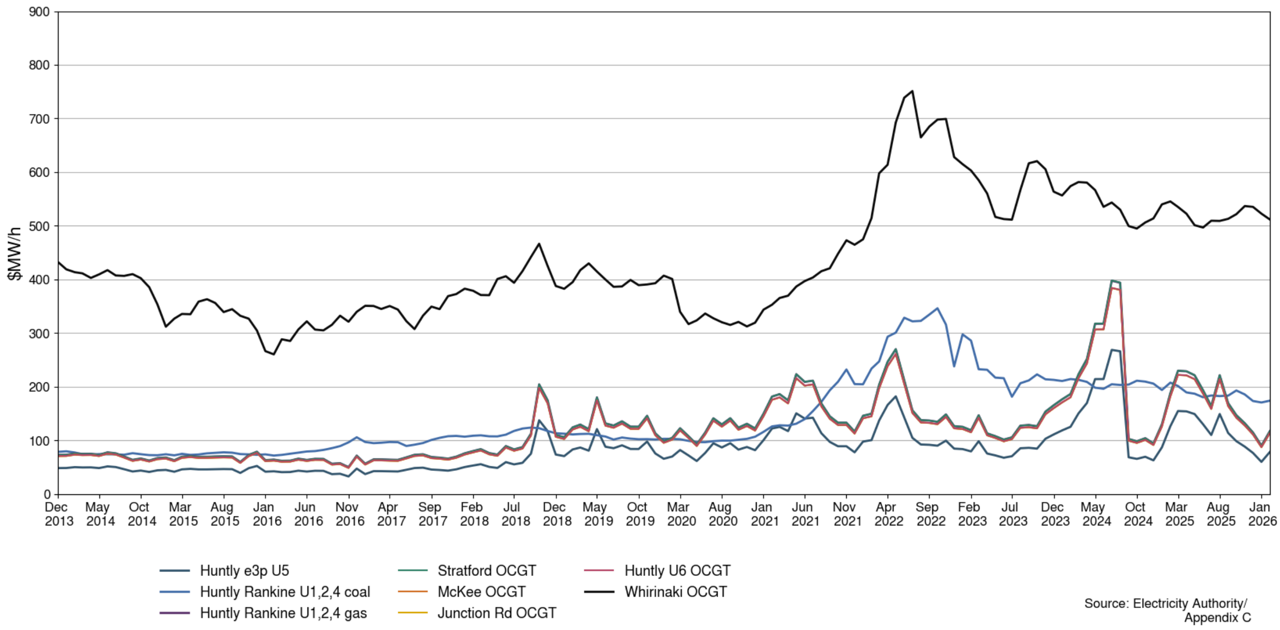
11.4. The latest SRMC of coal-fuelled Rankine generation is ~$174/MWh. The cost of running the Rankines on gas is ~$117/MWh.

11.5. The SRMC of gas-fuelled thermal plants is currently between $78/MWh and $117/MWh.

11.6. The SRMC of Whirinaki is ~$512/MWh.

11.7. More information on how the SRMC of thermal plants is calculated can be found in Appendix C.

Figure 22: Estimated monthly SRMC for thermal fuels

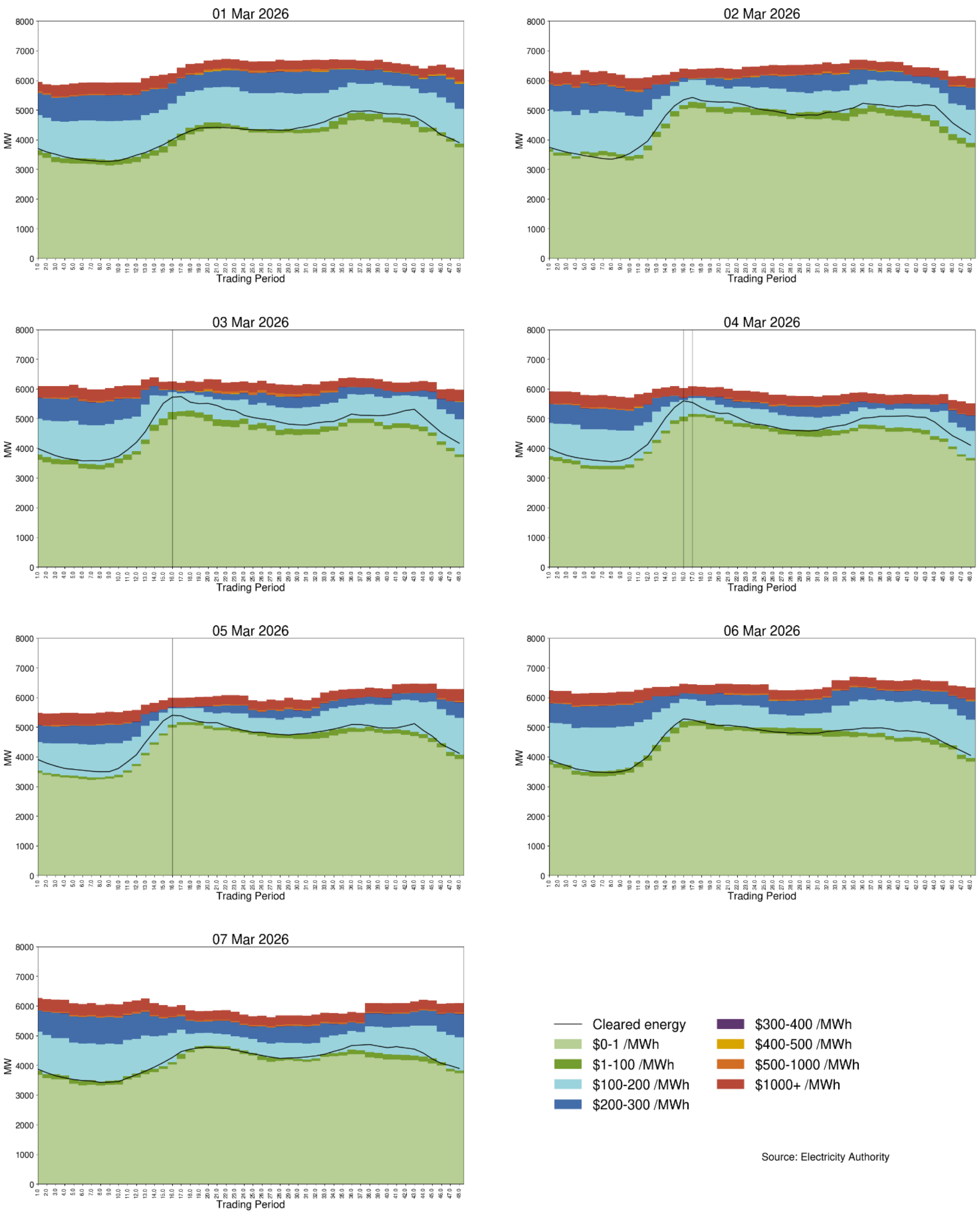


12. Offer behaviour

12.1. Figure 23 shows this week's national daily offer stacks. The black line shows cleared energy, indicating the range of the average final price.

12.2. Most offers cleared below $200/MWh this week. Some energy cleared below $1/MWh early Monday morning.

Figure 23: Daily offer stacks



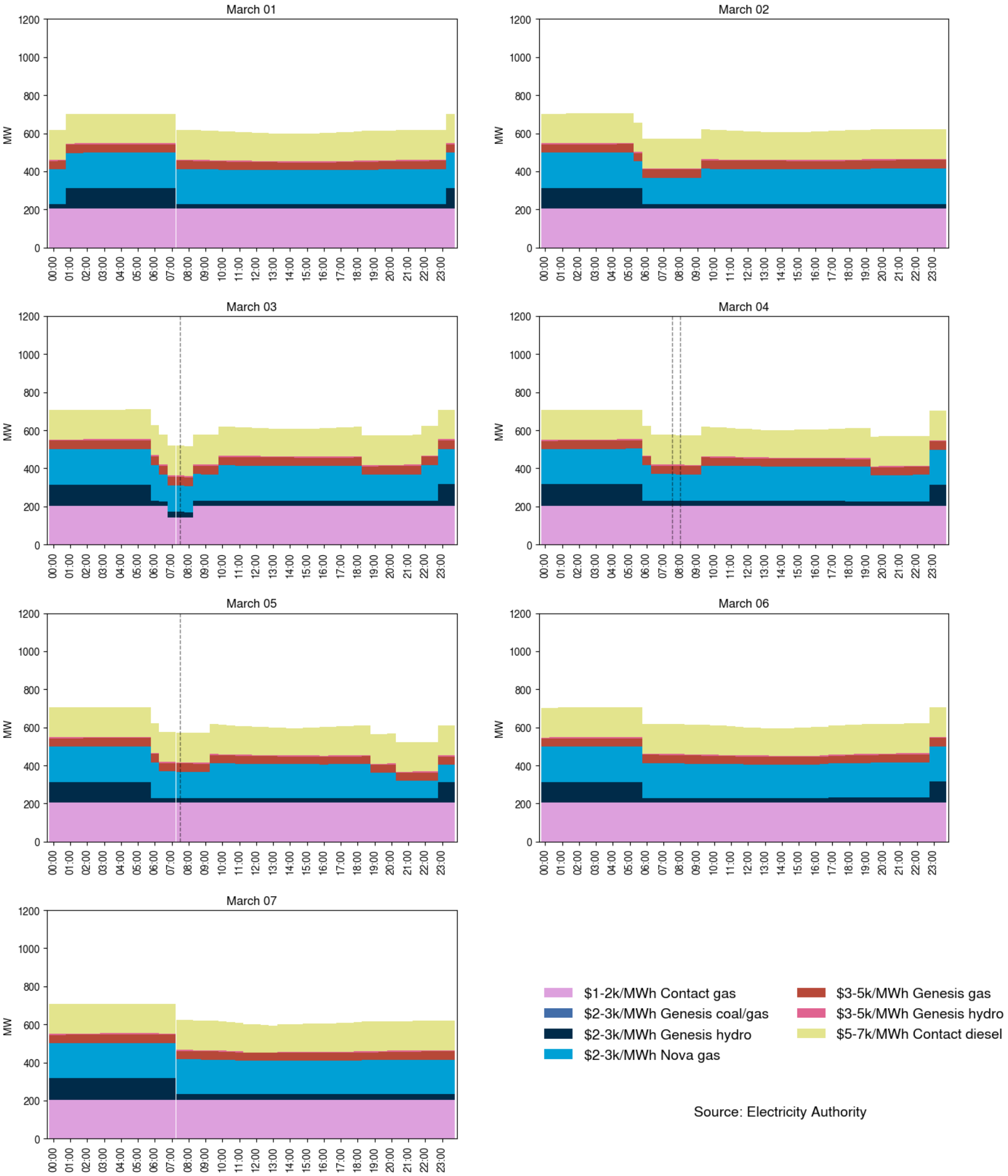
Source: Electricity Authority

12.3. Figure 24 shows offers above $1,000/MWh in each trading period this week. The largest proportion of these offers are fast start thermal operators.

12.4. If forecast prices are lower than thermal operating costs, this signals some generators may not be needed in that half-hourly trading period. Thermal generators may then price their units high, as they aren't expecting to run. These high prices reflect increased operating costs of running for only a short time. So, if demand is unexpectedly high, intermittent generation dips, or other generation fails, these high-priced thermal generators may get dispatched, sometimes resulting in a high spot price.

12.5. On average 631MW per trading period was priced above $1,000/MWh this week, which is roughly 12% of the total energy available.

Figure 24: High priced offers



Source: Electricity Authority

13. Ongoing work in trading conduct

13.1. This week prices generally appeared to be consistent with supply and demand conditions. The monitoring team is looking into offers at Waikaremoana further this week.

13.2. Further analysis is being done on the trading periods in Table 1 as indicated.

Table 1: Trading periods identified for further analysis

Date	Trading period	Status	Participant	Location	Enquiry topic
8/12/2025-11/12/2025	Several	Further analysis	Contact/Manawa	Coleridge, Cobb, and Matahina	Offers
12/01/2026-17/01/2026	Several	Further analysis	Mercury	Waikato	Offers
04/02/2026-05/02/2026	Several	Further analysis	Contact/Manawa	Matahina	Offers
03/03/2026-04/03/2026	Several	Further analysis	Genesis	Waikaremoana	Offers