30 March 2026

Trading conduct report 22-28 March 2026

Market monitoring weekly report

Trading conduct report 22-28 March 2026

1. Overview

1.1. This week the average spot price decreased by $10/MWh to $178/MWh. Slightly lower prices this week are related to higher wind generation and increased geothermal generation due to fewer geothermal plant outages. National hydro storage decreased this week to 79% nominally full and is equal to the historical average for this time of the 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 22-28 March:

(a) The average spot price for the week was $178/MWh, a decrease of around $10/MWh compared to the previous week.

(b) 95% of prices fell between $156/MWh and $200/MWh.

2.3. Higher wind generation and increased geothermal generation, due to fewer geothermal plant outages, have contributed to slightly lower prices this week.

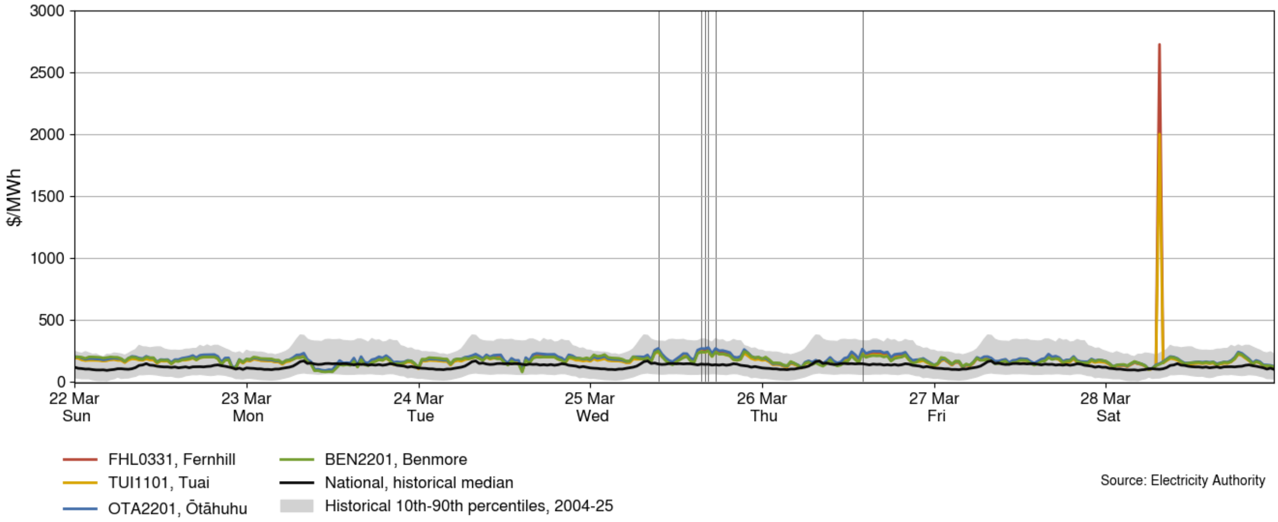
2.4. Prices spiked above $260/MWh on Wednesday, with a maximum Ōtāhuhu price of $276/MWh occurring at 4.30pm. During these times, demand was between 22-112MW higher than forecast.

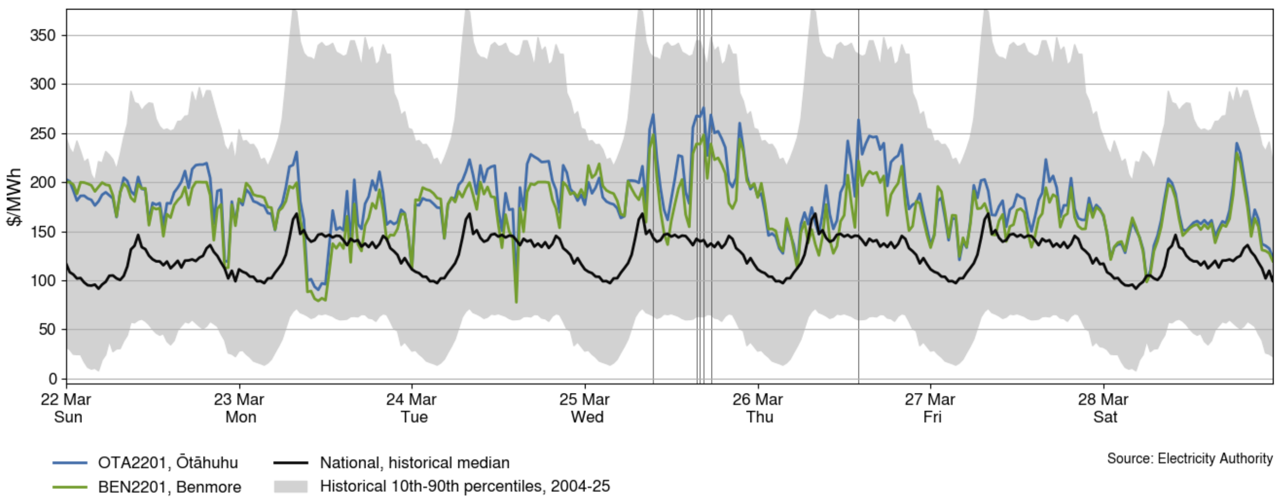
2.5. Prices also reached up to $263/MWh on Thursday afternoon, when intermittent generation was 68MW lower than forecast.

2.6. Constraints in the Hawke's Bay region caused prices to spike up to $2,000/MWh at Tuai and $2,723/MWh at Fernhill at 7.30am on Saturday.

2.7. Figure 1 shows the wholesale spot prices at Benmore and Ōtāhuhu 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, 22-28 March

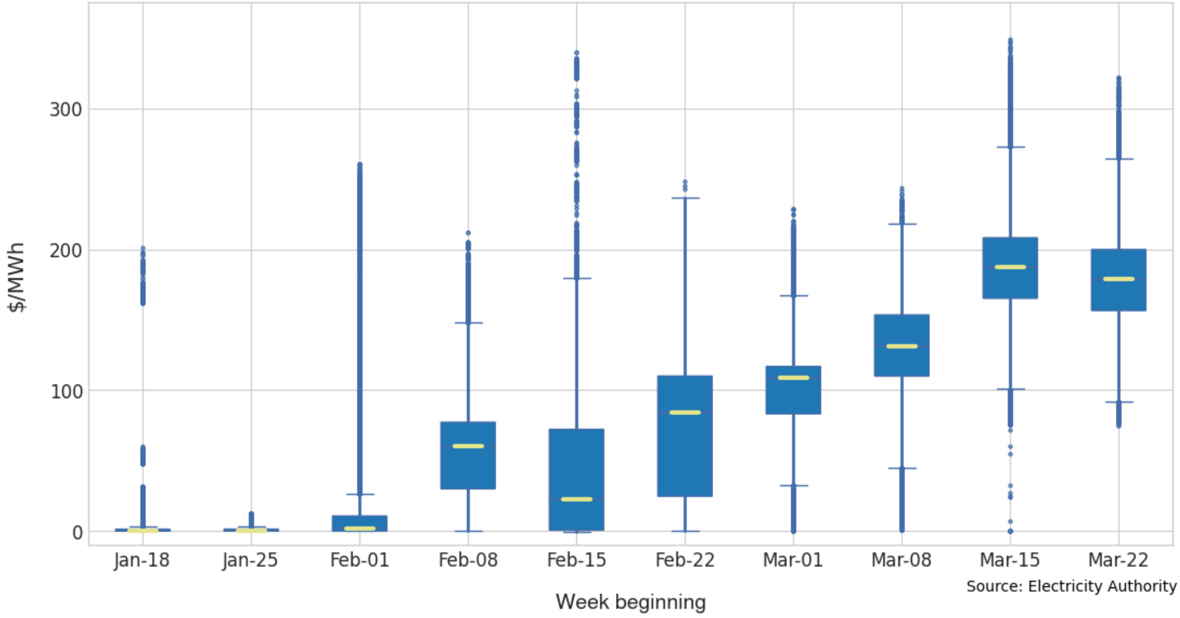




2.8. Figure 2 shows a box plot with the distribution of spot prices during this week and the previous nine weeks. The yellow line shows each week's median price, while the blue box shows the lower and upper quartiles (where 50% of prices fell). The 'whiskers' extend to points that lie within 1.5 times 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 has shifted slightly lower compared to last week. The median price was $179/MWh and most prices (middle 50%) fell between $156/MWh and $200/MWh.

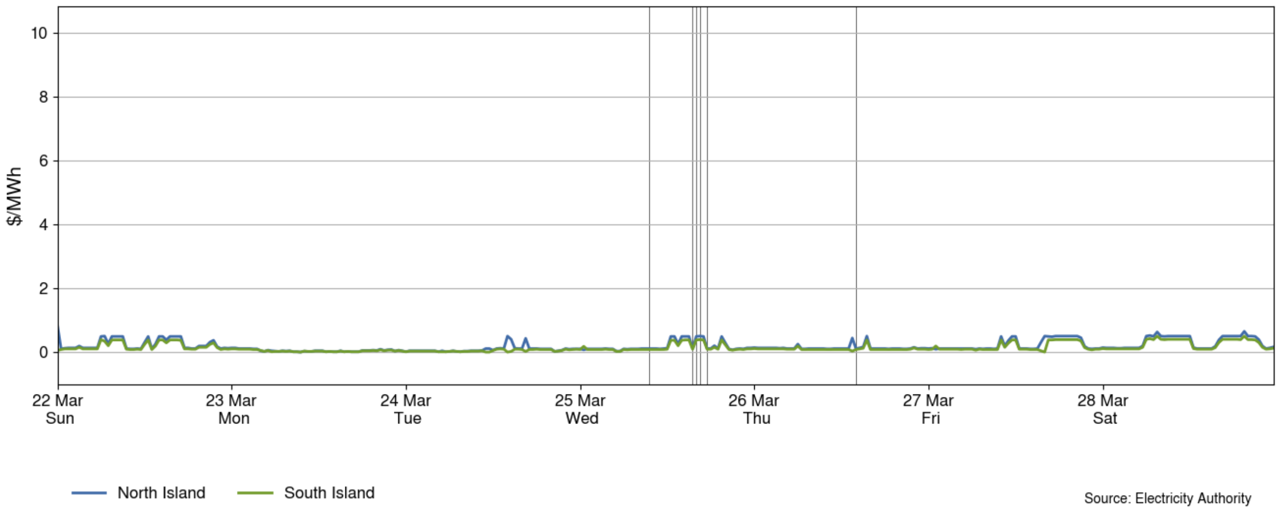
Figure 2: Box plot showing the distribution of spot prices this week and the previous nine weeks



3. Reserve prices

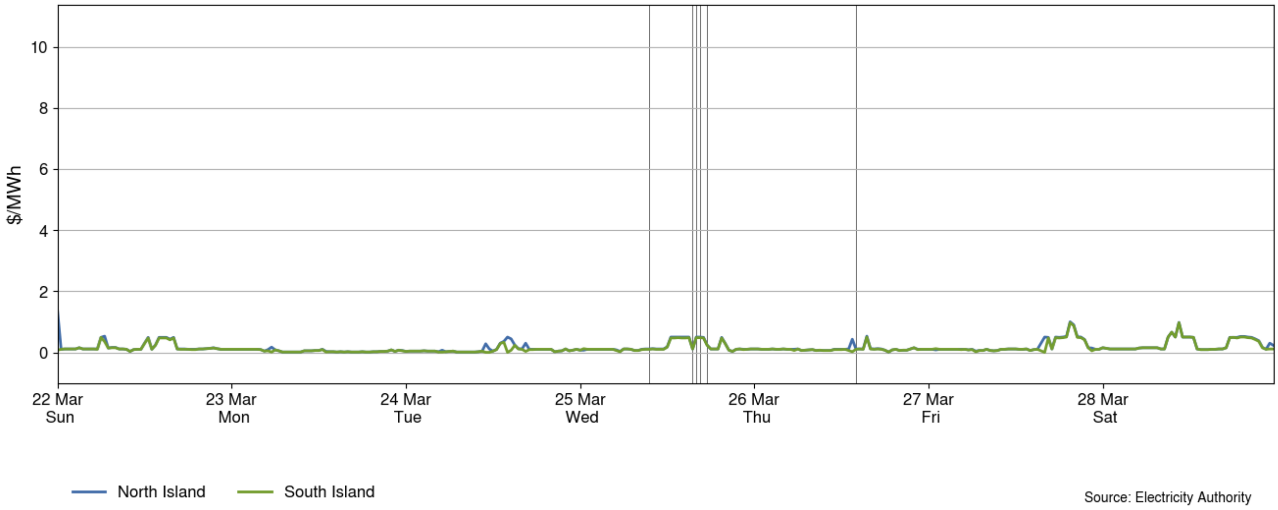
3.1. Fast instantaneous reserve (FIR) prices for the North and South Islands are shown below in Figure 3. FIR prices across both the North and South Islands remained below $1/MWh this week.

Figure 3: Fast instantaneous reserve price by trading period and island, 22-28 March



3.2. 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 $2/MWh this week.

Figure 4: Sustained instantaneous reserve by trading period and island, 22-28 March



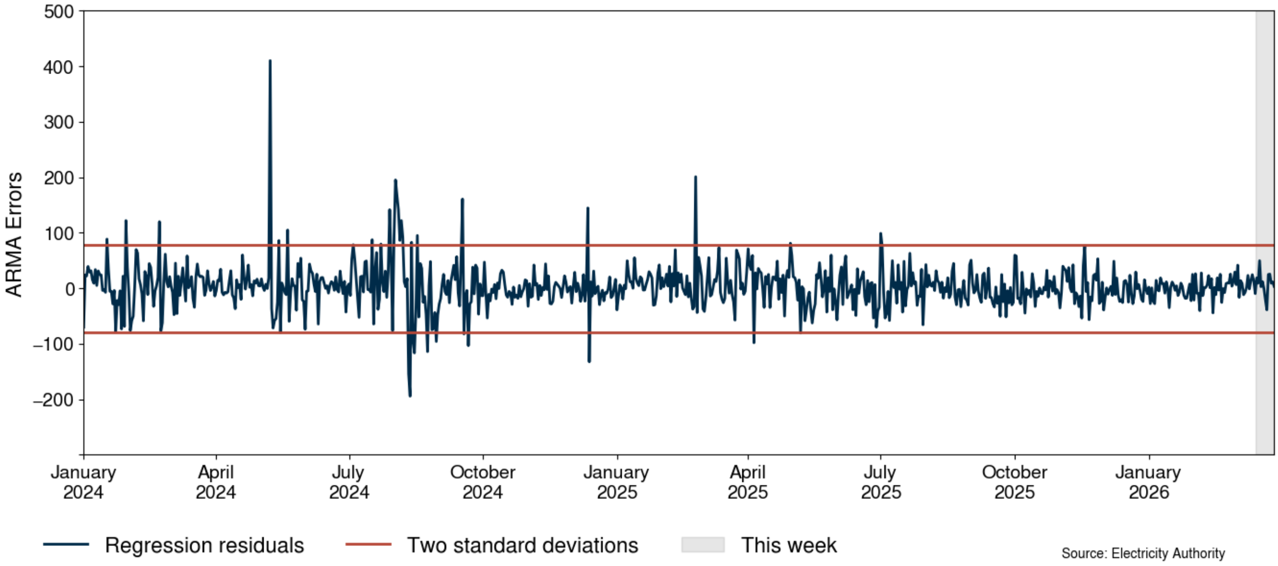
4. Regression residuals

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 - 28 March 2026

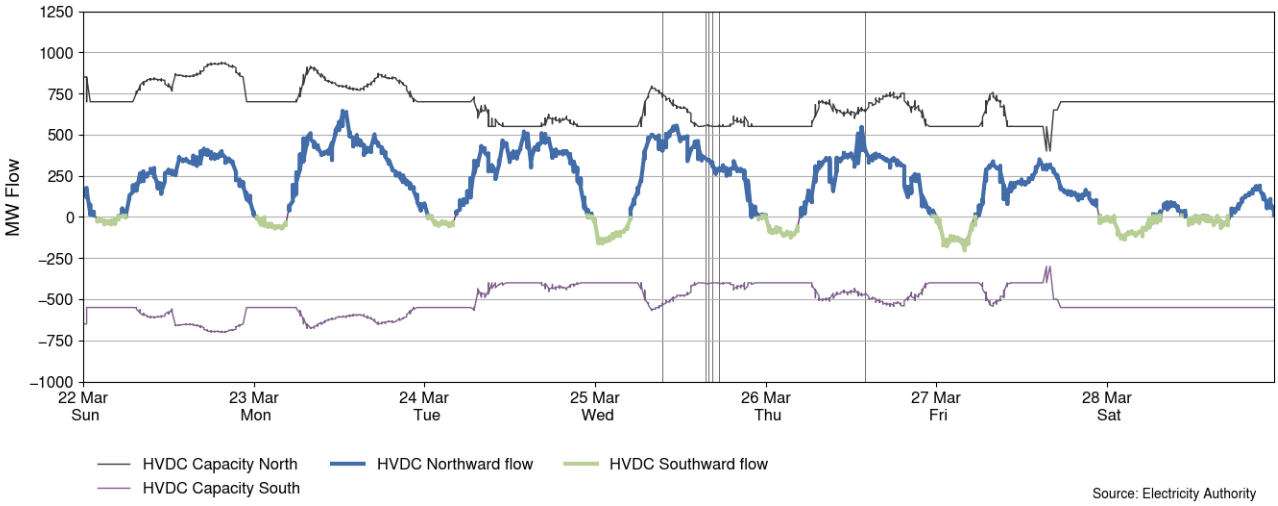


5. HVDC

5.1. Figure 6 shows the HVDC flow between 22-28 March. HVDC flows were mostly northward during the day, aside from a period on Saturday when wind generation was high. Southward HVDC flows occurred every night this week.

5.2. The highest northward flow occurred on Monday at 12.30pm with a flow of around 643MW.

Figure 6: HVDC flow and capacity, 22-28 March



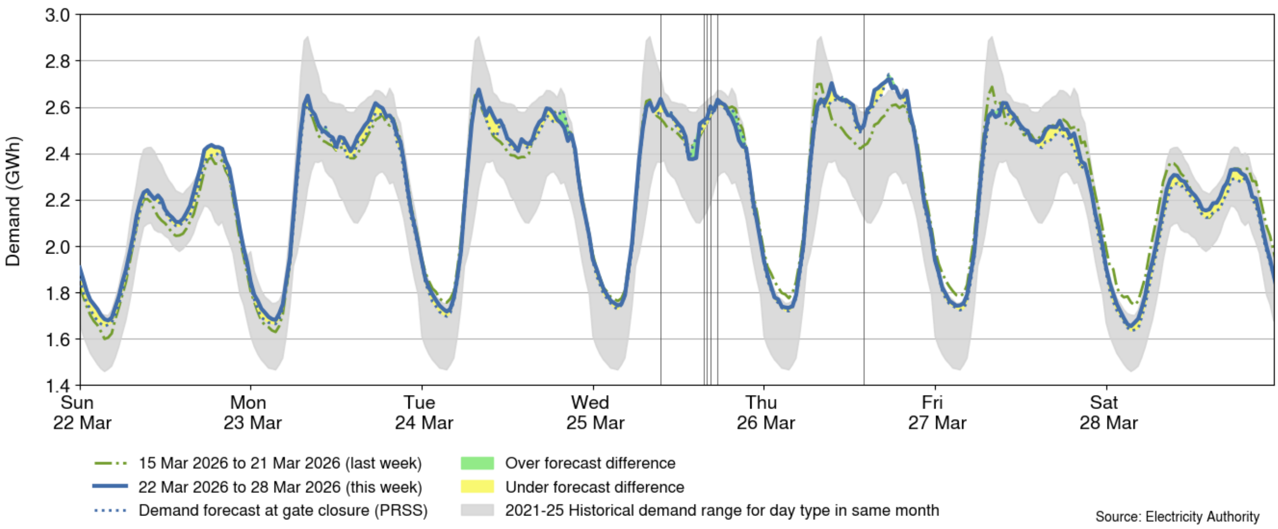
6. Demand

6.1. Figure 7 shows national demand between 22-28 March, compared to the historic range and the demand of the previous week.

6.2. Demand was mostly similar to the previous week, although demand was often higher compared to the previous week on Thursday. Demand reductions on Wednesday and Thursday are related to changes in demand at Tiwai.

6.3. The highest demand of the week was around 2.72GWh at 5.30pm on Thursday.

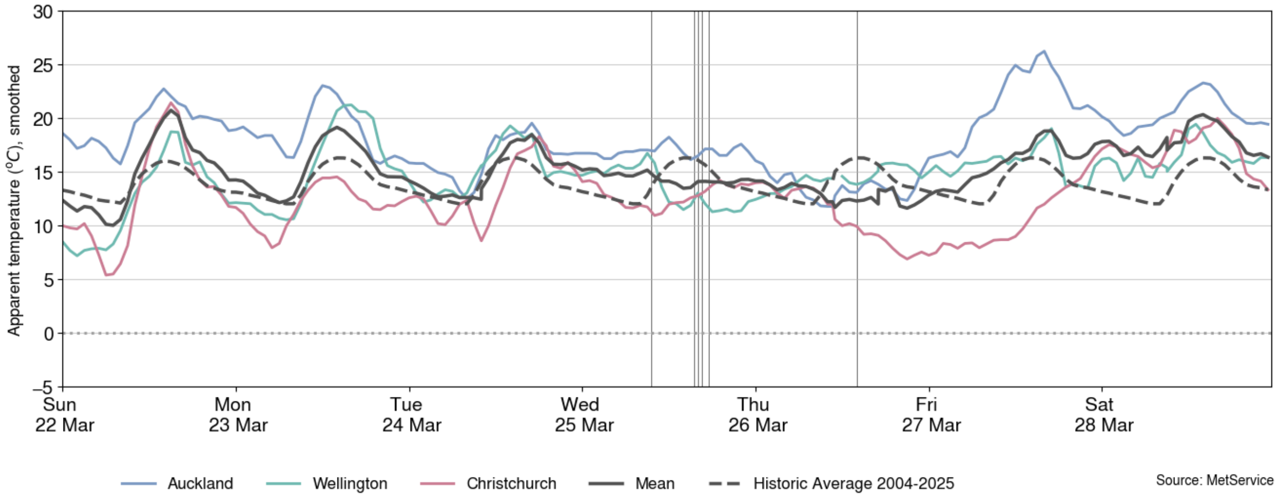
Figure 7: National demand, 22-28 March compared to the previous week



6.4. Figure 8 shows the hourly apparent temperature at main population centres from 22-28 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 12°C to 27°C in Auckland, 7°C to 22°C in Wellington, and 4°C to 22°C in Christchurch.

Figure 8: Temperatures across main centres, 22-28 March



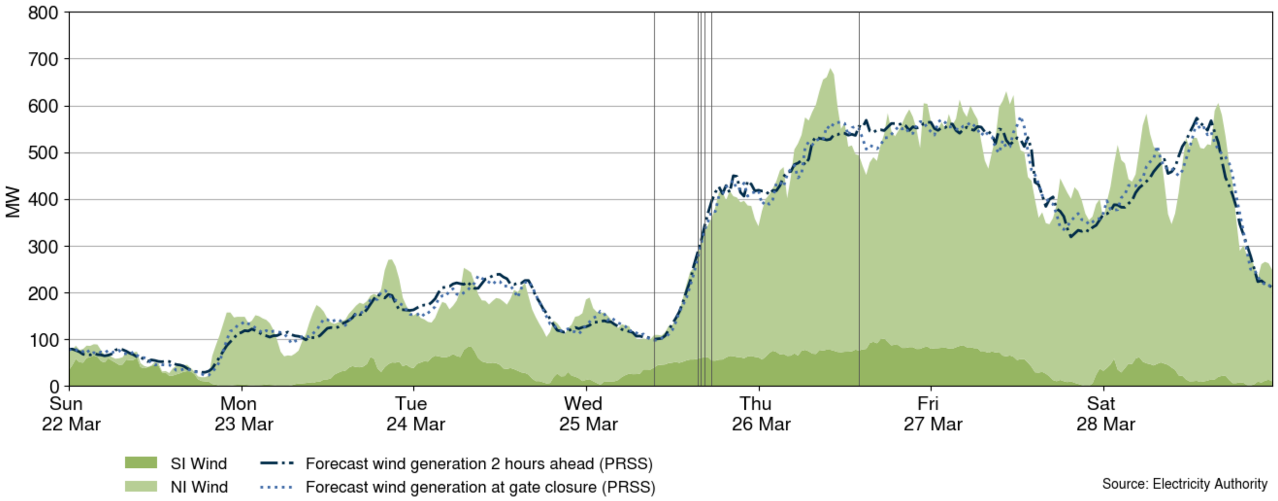
7. Generation

7.1. Figure 9 shows wind generation and forecast from 22-28 March. This week wind generation varied between 19MW and 680MW, with a weekly average of 295MW.

7.2. Wind was low overall until Wednesday evening. Wind generation then increased and remained mostly above 400MW for the rest of the week until Saturday evening.

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

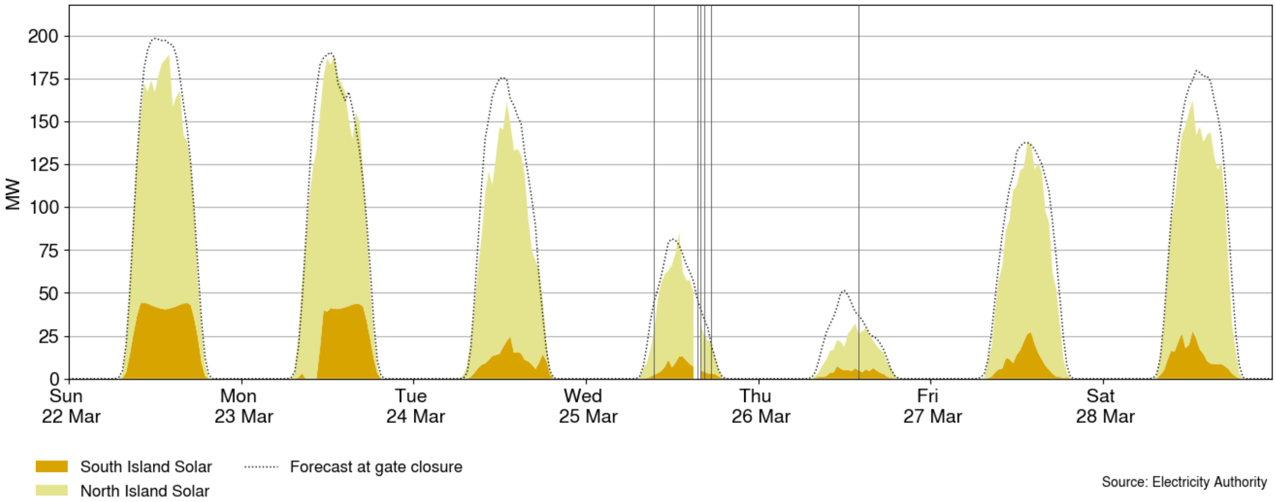
Figure 9: Wind generation and forecast, 22-28 March



7.4. Figure 10 shows grid connected solar generation from 22-28 March. Solar generation reached above 135MW each day this week, aside from on Wednesday and Thursday, where a maximum of only 85MW and 32MW was reached respectively on these days. Solar generation peaked at 2.00pm on Sunday at 189MW.

7.5. Note there is missing data for trading period 32 on Wednesday.

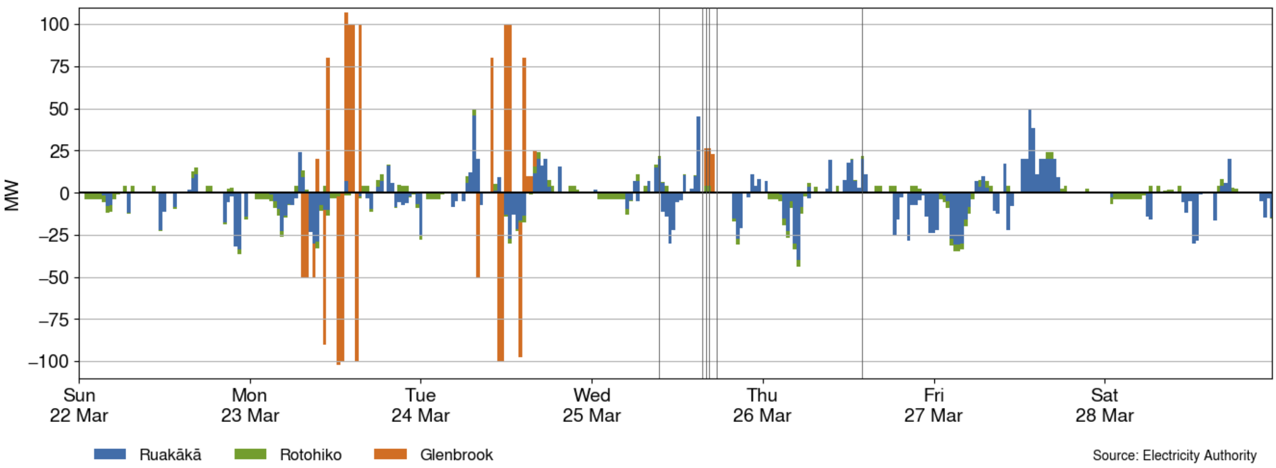
Figure 10: Grid connected solar generation, 22-28 March



7.6. Figure 11 shows when the grid scale batteries Rotohiko (35MW/35MWh), Ruakākā (100MW/200MWh) and Glenbrook (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.

7.7. This week, the batteries mostly discharged during times of higher prices during the day. The batteries mostly charged during relatively lower prices overnight or during the day. Glenbrook charge and discharge continues to vary as it commissions.

Figure 11: Grid scale battery charge and discharge, 22-28 March



7.8. 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[1]) projections. The figure highlights

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

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.

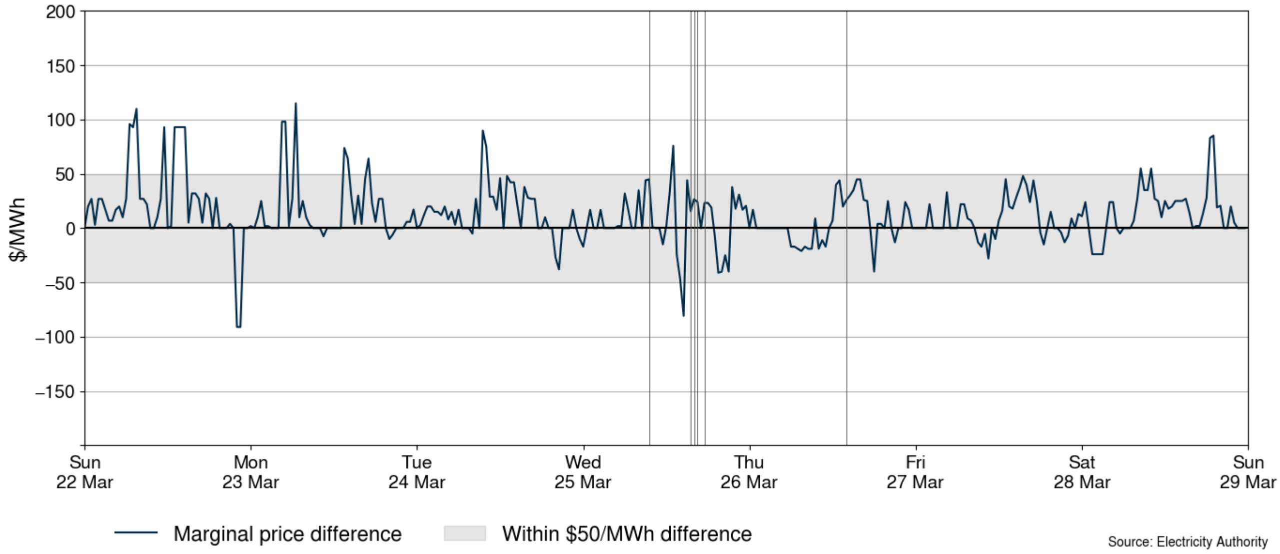
7.9. Several trading periods this week had marginal price differences greater than $50/MWh.

7.10. Multiple positive differences occurred on Sunday between 6.30am and 2.30pm. During these times, demand was often higher than forecast and intermittent generation slightly lower than forecast.

7.11. The maximum positive difference of $115/MWh occurred on Monday at 6.30am. At this time, demand was 106MW higher than forecast and intermittent generation 38MW lower than forecast.

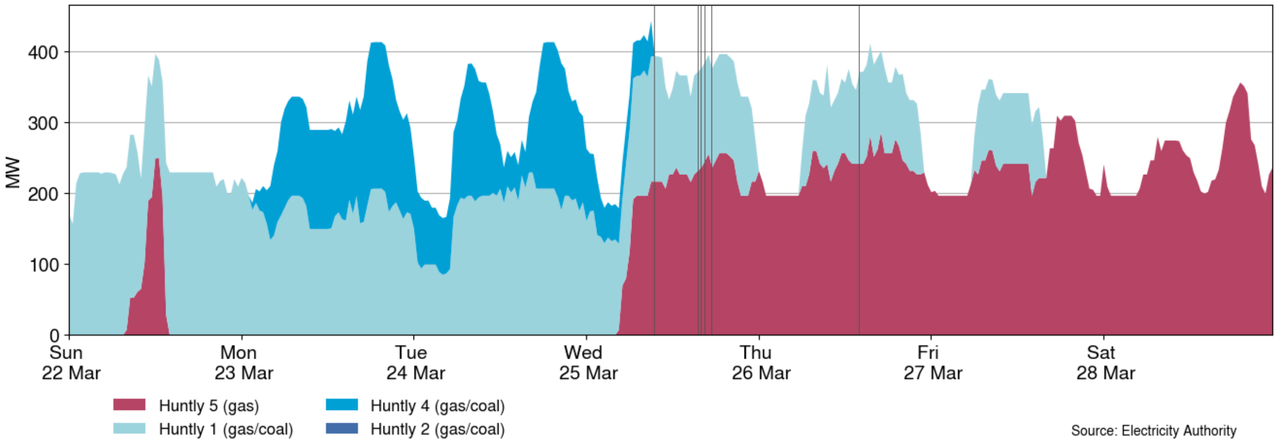
7.12. The maximum negative difference of $91/MWh occurred on Sunday at 10.00pm. While demand was 49MW higher than forecast at this time, which would typically cause higher prices than expected, intermittent generation was 59MW higher than forecast.

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, 22-28 March



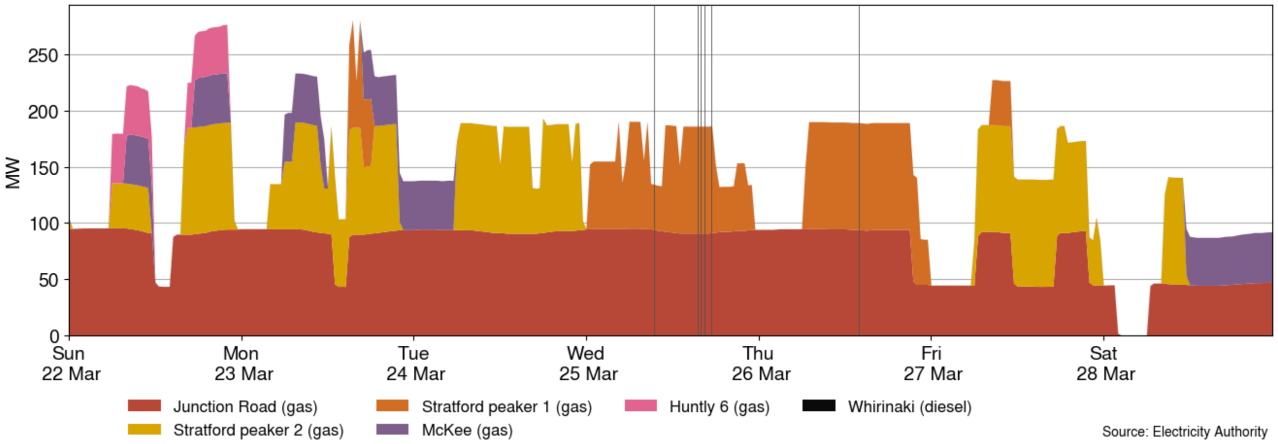
7.13. Figure 13 shows the generation of thermal baseload between 22-28 March. Huntly 5 ran briefly on Sunday and then from Wednesday onwards. Huntly 1 ran between Sunday and Friday, with Huntly 4 running between Monday and Wednesday.

Figure 13: Thermal baseload generation, 22-28 March



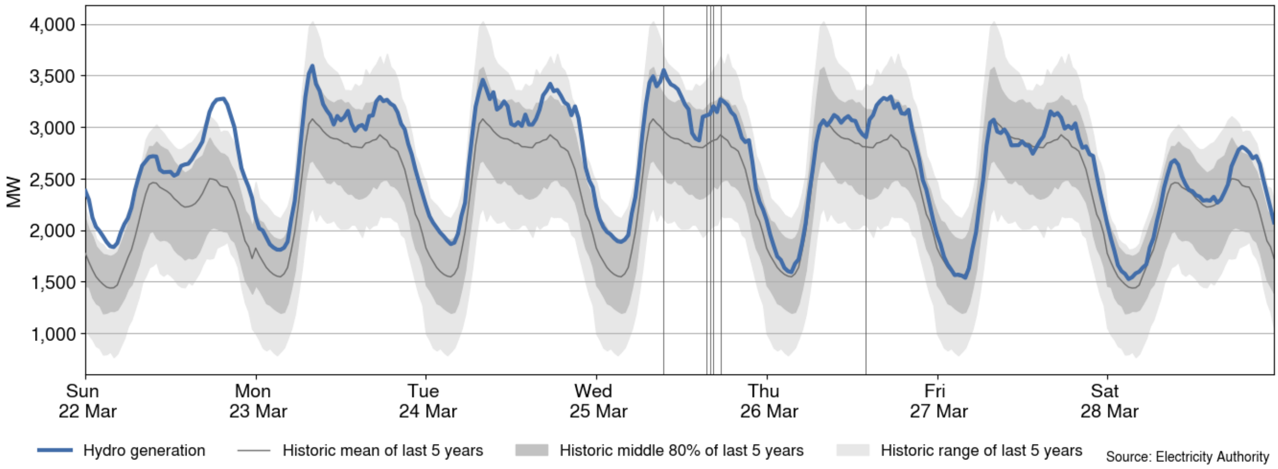
7.14. Figure 14 shows the generation of thermal peaker plants between 22-28 March. Junction Road ran for most of the week, with McKee running at times between Sunday and Tuesday and on Saturday. Stratford peaker 1 ran on Monday, Wednesday and Thursday, while Stratford peaker 2 ran each day aside from Wednesday and Thursday. Huntly 6 also ran at times on Sunday.

Figure 14: Thermal peaker generation, 22-28 March



7.15. Figure 15 shows hydro generation between 22-28 March. Hydro generation was mostly above the historic mean until Thursday morning, where higher wind generation meant hydro generation remained mostly close to the historic mean for the rest of the week.

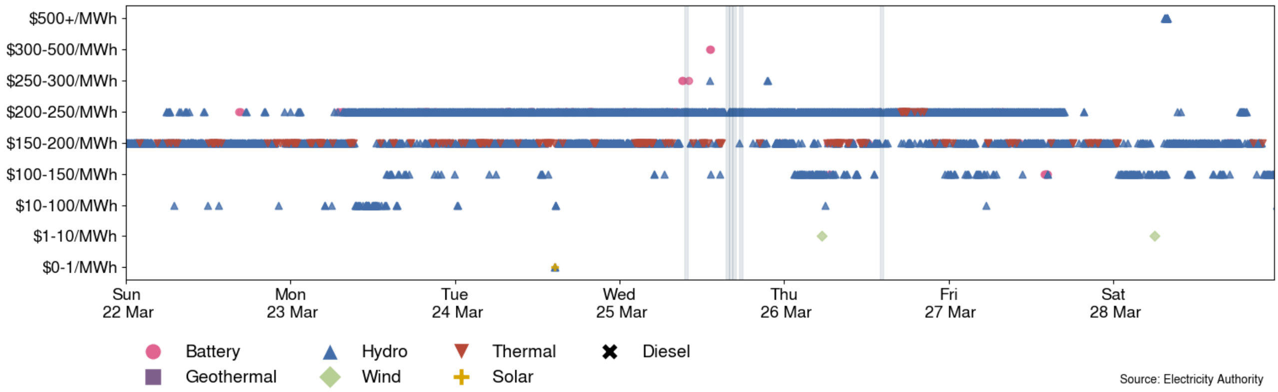
Figure 15: Hydro generation, 22-28 March



7.16. 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.

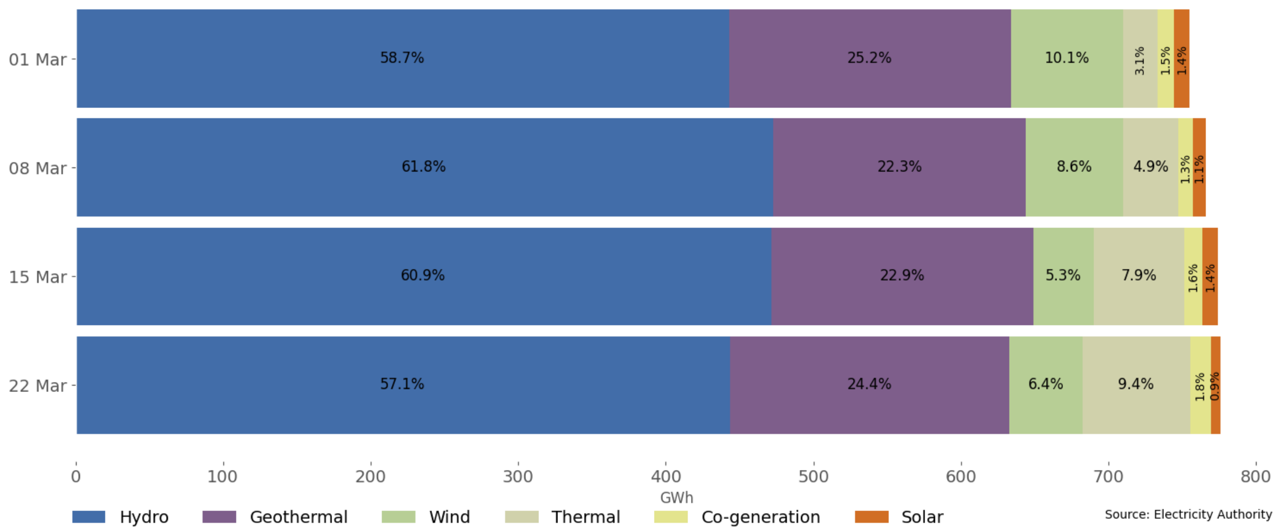
7.17. The highest prices were set by Genesis hydro on Saturday. The most common technology was hydro generation, with thermal generation the second most common. Most marginal prices were between $150-200/MWh.

Figure 16: Prices of marginal generation, 22-28 March



7.18. As a percentage of total generation, between 22-28 March, total weekly hydro generation was 57.1%, geothermal 24.4%, wind 6.4%, thermal 9.4%, co-generation 1.8%, and solar (grid connected) 0.9%, as shown in Figure 17.

Figure 17: Total generation by type as a percentage each week, between 1 March and 28 March



8. Outages

8.1. Figure 18 shows generation capacity on outage. Total capacity on outage between 22-28 March ranged between ~1,608MW and ~2,693MW. Figure 19 shows the thermal generation capacity outages.

Figure 18: Total MW loss from generation outages, 22-28 March

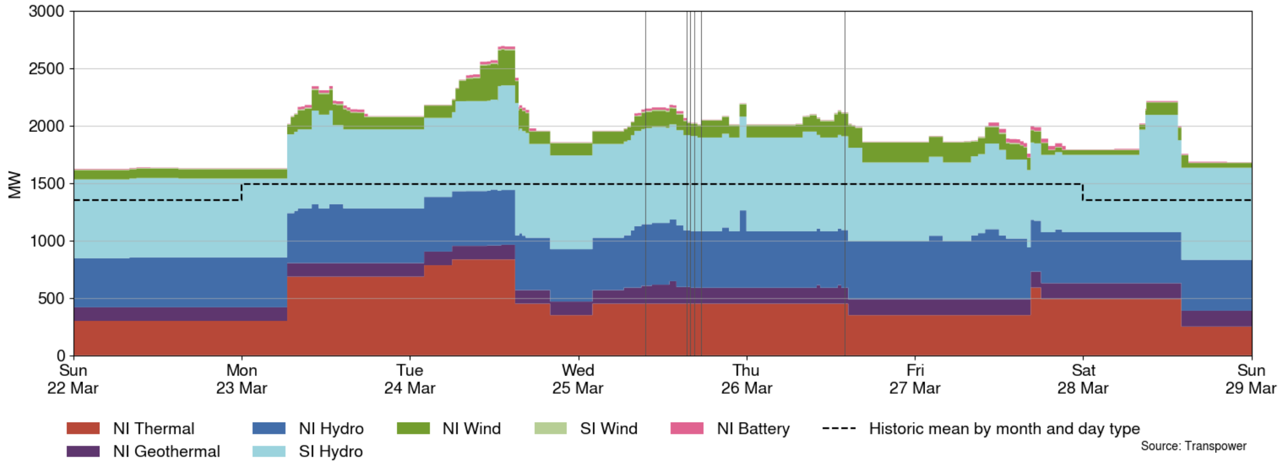
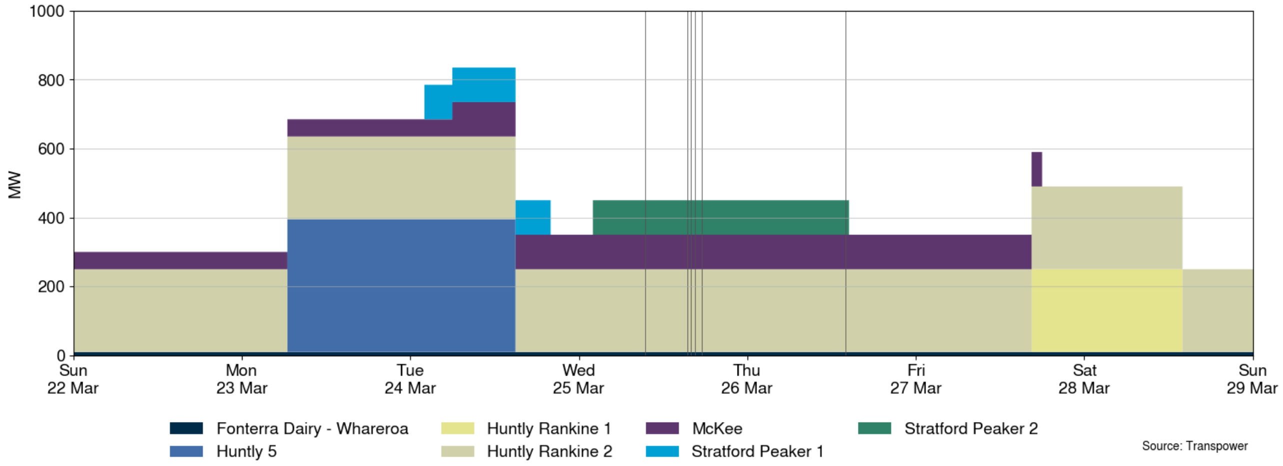


Figure 19: Total MW loss from thermal outages, 22-28 March



8.2. Notable outages include:

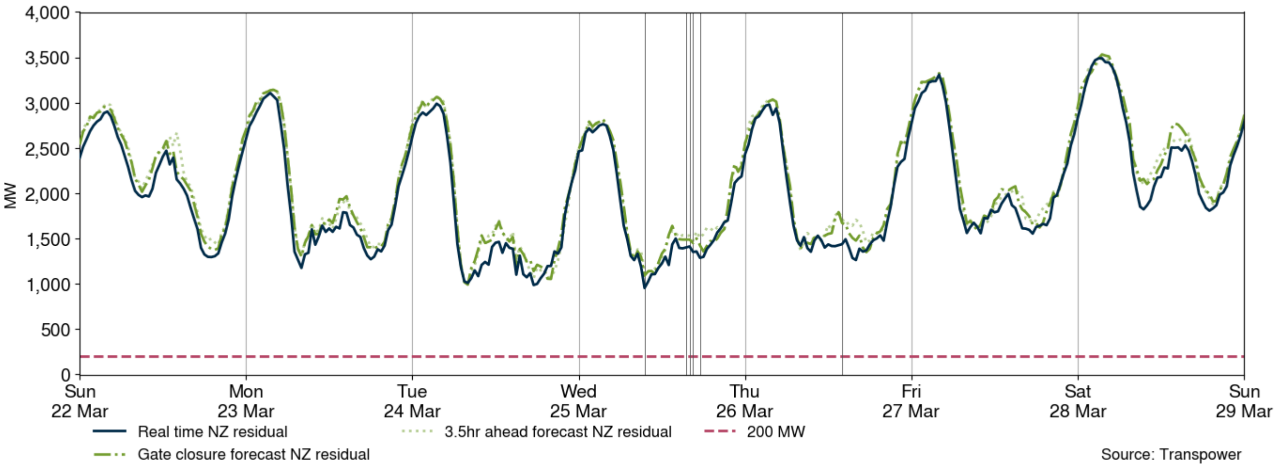
Plant	Partial or Full	End Date
Huntly 5	Full	24 March 2026
Manapōuri unit 6	Full	25 March 2026
Stratford peaker 2	Full	26 March 2026
Huntly 1	Full	28 March 2026
Rangipō unit 6	Full	29 March 2026
Manapōuri unit 5	Full	30 March 2026
Benmore unit 5	Full	2 April 2026
Huntly 2	Full	28 April 2026
Clyde unit 2	Full	1 May 2026
Manapōuri unit 4	Full	30 June 2026
Roxburgh unit 8	Full	2 September 2026

9. Generation balance residuals

9.1. Figure 20 shows the national generation balance residuals between 22-28 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, national residuals were healthy this week. The lowest national residual was 953MW on Wednesday at 9.30am.

Figure 20: National generation balance residuals, 22-28 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 28 March, national controlled storage was 79% nominally full and is equal to the historical average for this time of the year.

10.3. Storage at Lake Pūkaki (82% full[2]) is close to its historic mean, while Lake Takapō (76% full) is below its historic mean.

10.4. Storage at Lake Te Anau (45% full) is below its historic mean, with Lake Manapōuri (47% full) also below its historic mean.

10.5. Storage at Lake Taupō (78% full) is above its historic 90th percentile for this time of year.

10.6. Storage at Lake Hawea (92% full) is below its historic 90th percentile but remains above its historic mean.

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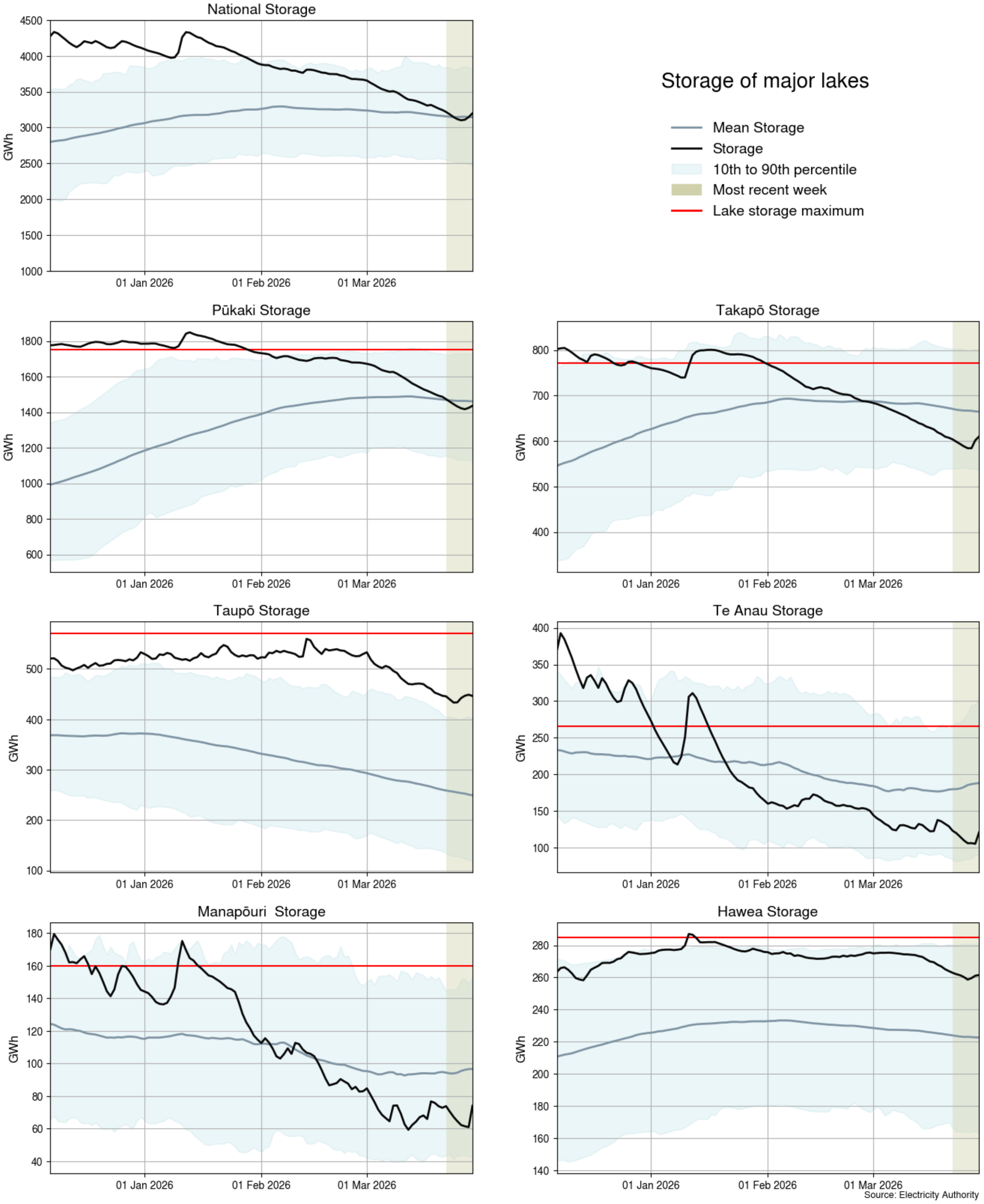
[2] Percentage full values sourced from NZX Hydro.

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 March 2026. Coal prices were last updated on 1 February so previous prices have been carried forward. The SRMCs for all thermal-fuelled generation have increased.

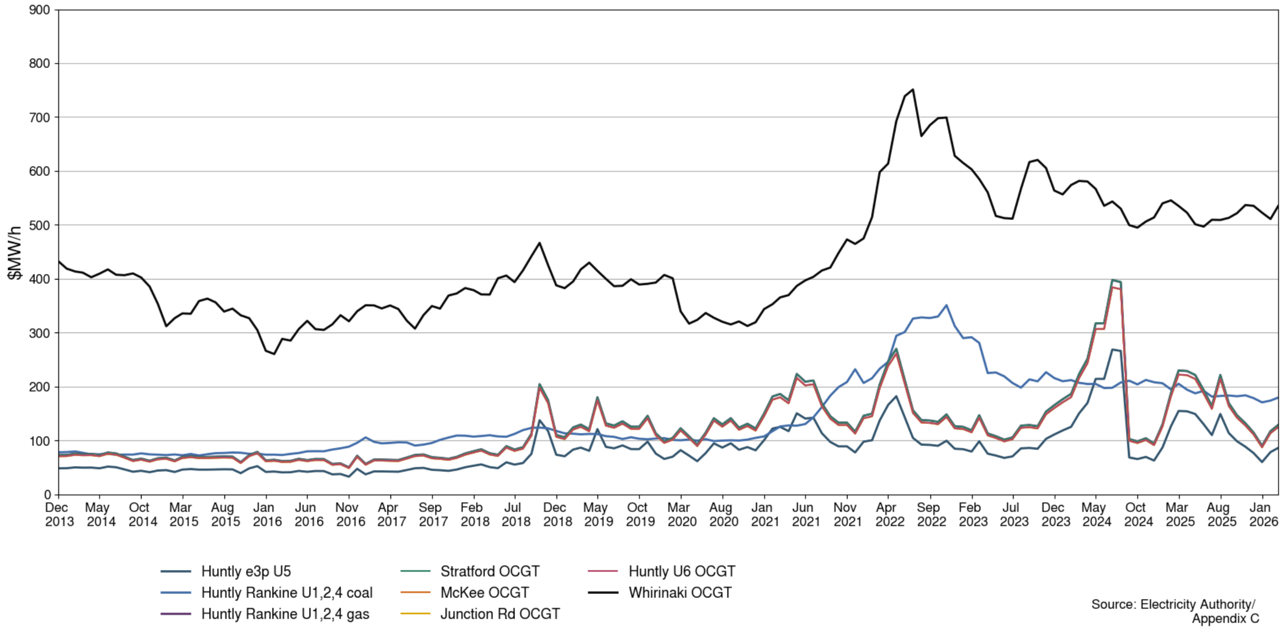
11.4. The latest SRMC of coal-fuelled Rankine generation is ~$179/MWh. The cost of running the Rankines on gas is ~$128/MWh.

11.5. The SRMC of gas-fuelled thermal plants is currently between $86/MWh and $129/MWh.

11.6. The SRMC of Whirinaki is ~$535/MWh. We will be updating our SRMCs in the next report.

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



Source: Electricity Authority/ Appendix C

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.

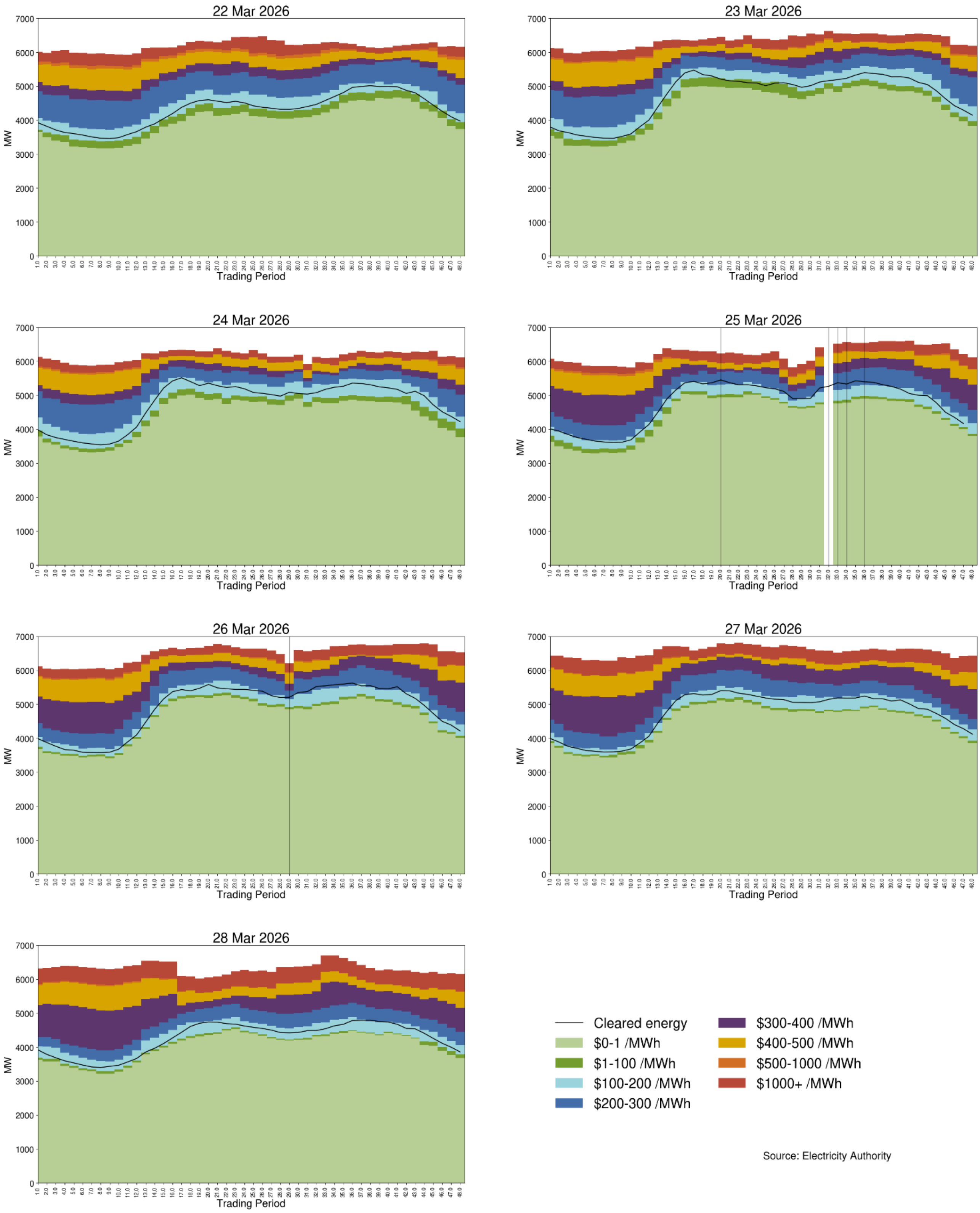
12.2. Most offers cleared below $200/MWh, although energy did clear above $200/MWh at times on Wednesday and Thursday.

12.3. High priced Meridan hydro offers were priced up into the $300-400/MWh range from Wednesday, particularly overnight.

12.4. Offers from multiple Meridian hydro stations decreased on Wednesday between 1.00pm to 2.30pm and on Thursday at 2.00pm, aligning with decreases in demand at Tiwai. High priced offers on Saturday reduced during an outage at Aviemore, Benmore.

12.5. Note there is missing data for trading period 32 on Wednesday.

Figure 23: Daily offer stacks



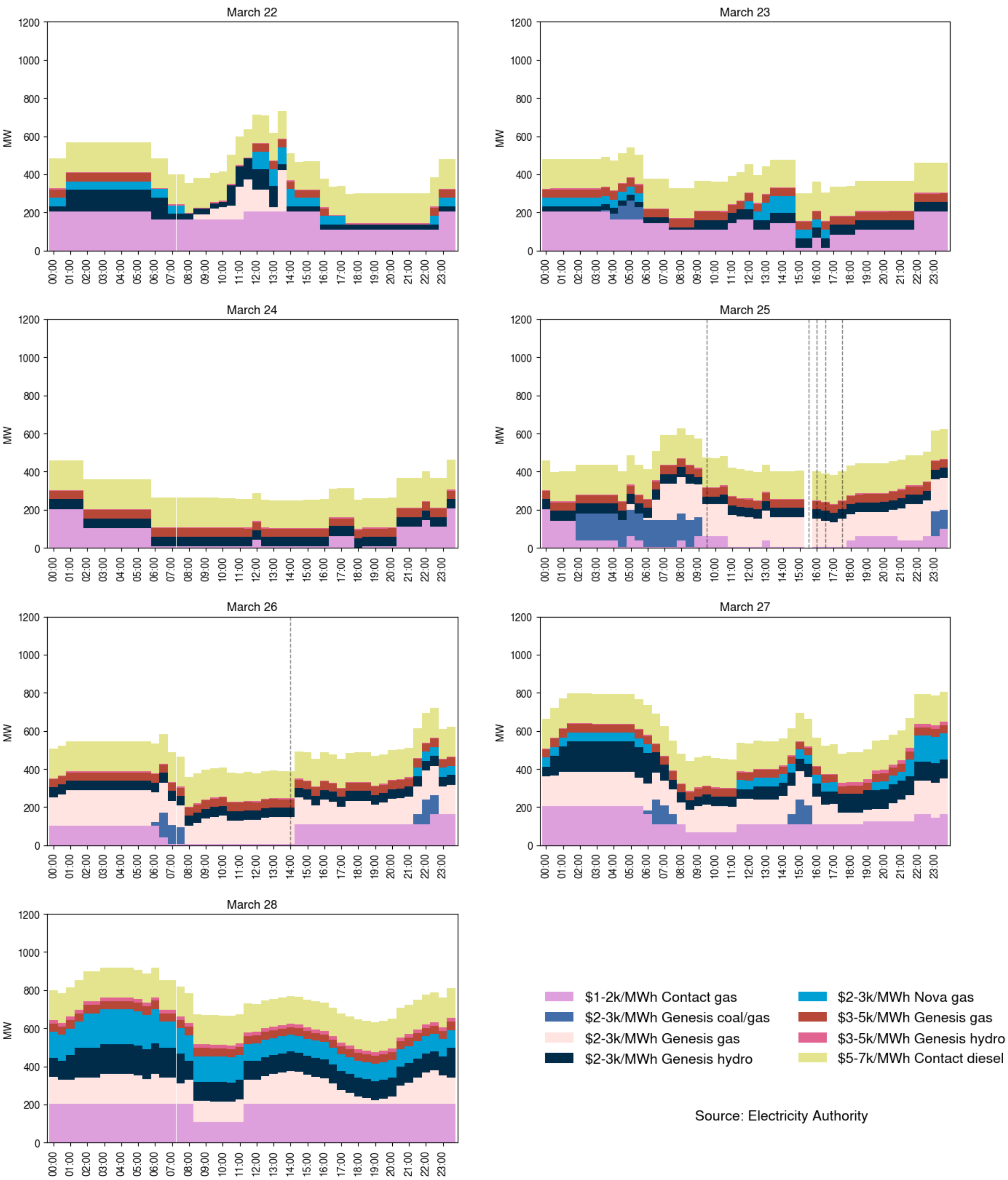
Source: Electricity Authority

12.6. 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.

12.7. 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.

12.8. On average 504MW per trading period was priced above $1,000/MWh this week, which is roughly 9.5% 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.

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
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
13/03/2026	27-31	Further analysis	Genesis	Huntly 1 and 4	Offers
13/03/2026	27-30	Further analysis	Contact	Clyde	Offers