The Authority's decision on claim of an undesirable trading situation

Claim submitted 8 November 2018 by Electric Kiwi, Flick Energy, Pulse Energy, Switch Utilities (Vocus), and Vector

Decision made: 14 February 2019

Decision paper released: 28 February 2019

Executive summary

An undesirable trading situation (UTS) is a situation outside of the normal operation of the electricity market that threatens, or may threaten, confidence in, or the integrity of, the wholesale market. The UTS provisions in the Code give us extensive powers to take corrective action if we consider a UTS has developed or is developing. A UTS is a situation that has, or may have, serious consequences for the market.

On 8 November 2018 we received a claim from five participants that a UTS had begun on 15 September 2018 and was continuing at the time of the claim. The claim alleged the UTS was caused by a confluence of factors, being: gas supply disruptions, failure of the hedge market, high spot prices caused by collusion, and breaches of the Code relating to information disclosure obligations.

We investigated the matters in the claim, as well as indicators of market integrity and confidence. Our analysis and conclusions are set out in this decision document. After considering each piece of analysis individually and collectively, we found there was no UTS.

Our investigation focussed on the criteria for a UTS, including whether we needed to use extraordinary powers to avoid serious consequences for the market. Our investigation did not seek to determine whether the Code or other laws had been breached, but it did find some indications of behaviour that require further examination.

Our compliance team and the UTS investigation team are liaising regarding alleged non-compliance with information disclosure obligations in the Code. We have referred allegations relating to Australian securities law to the Australian Securities and Investments Commission (ASIC), and will provide further assistance as necessary.

Spot prices in spring 2018 were unusually high. By some measures spot prices (in particular in October 2018) set new records in the history of the New Zealand electricity market. High spot prices, if they accurately reflect underlying supply and demand, are a useful and necessary feature of the market. High spot prices indicate high demand, low supply, or both, and can incentivise parties to take action to ensure that supply always matches demand in the short, medium, and long term.

Our investigation found that spot prices reflected underlying supply and demand. In particular demand was above average and supply was constrained by a combination of low hydro storage and gas production outages. We also found there was no evidence the high spot prices were caused by collusion or other undesirable behaviour. The high spot prices in spring 2018 helped ensure supply always matched demand because they suppressed demand and it became economic for more expensive generating plant to run.

It is up to participants to be aware of, and manage the risk of, potential high spot prices (or low spot prices if they are generators). In general, it is also up to participants to determine how much risk to take on, and how to manage that risk. Our focus is on ensuring participants have tools available to manage their spot price risk, such as the hedge market. The claimants allege that the hedge market failed to provide effective risk management to participants. However, our investigation found that the hedge market performed as expected and that parties who hedged before spot prices began to rise had little concern with managing their spot price risk. Nonetheless, we are aware of issues with liquidity in the hedge market. Our investigation highlighted these issues again. We indicated in 2018 that we will look at these in our 2019/20 work programme.

Our investigation raised concerns that participants are not using all available sources of information relevant to the electricity market, and that some of the information available is difficult to find and interpret. We are considering whether these issues warrant further attention.

Contents

Figures

1 Introduction

1.1 A UTS is a situation that threatens, or may threaten, confidence in, or the integrity of, the wholesale market (and which cannot be resolved via other mechanisms under the Code). The Code provides us extensive powers to take corrective action if we consider a UTS has developed or is developing.

1.2 A UTS is a situation outside of normal market operations. It is a situation that has, or may have, serious consequences for the wholesale market, and which does not occur on a regular basis.

1.3 We received a claim from five participants on 8 November 2018 that a UTS had begun on 15 September 2018 and was continuing at the time of the claim. In practice, we investigate all UTS claims, and we opened an investigation into the allegations made in that claim.

1.4 This document sets out our decision, and the reasons for it, in relation to the situation described in the claim provided to us on 8 November 2018 ('the situation').

1.5 In responding to this claim, we have followed our guidelines for processing UTS claims.[1]

2 The situation does not constitute a UTS

2.1 We find that a UTS did not occur during the investigation period.[2] We found no evidence that the situation threatened, or may threaten, confidence in, or the integrity of, the wholesale market.

2.2 The reasons for this finding are:

(a) The factors cited by the claimants in support of there being a UTS either did not occur (either partially or wholly), or were a function of the market operating normally. We found that none of the factors cited by the claimants provide sufficient evidence that a UTS existed.

(b) Market indicators show no sign that market confidence and integrity were threatened.

(c) The claimants' factors and market indicators either individually or as a whole do not support a finding that the situation threatened, or may threaten, confidence in, or the integrity of, the wholesale market.

2.3 Our analysis to support these reasons is in sections 9 and 10 of this paper.

3 The situation highlighted issues with current arrangements

3.1 Although we find there is no UTS, our investigation drew attention to aspects of the wholesale market that could be improved. In particular, hedge market liquidity and information availability.

---

1 The guidelines are on our website: https://www.ea.govt.nz/dmsdocument/8960-guidelines-for-participants-on-undesirable-trading-situations.

2 The investigation period is defined in paragraph 7.11.

3.2 The current arrangements for supporting liquidity in the hedge market are not robust enough. This is consistent with the finding in our winter 2017 review.[3] We have a project in our indicative 2019/20 work programme with scope to look at this issue.

3.3 Issues with the current arrangements for information availability in the Code were highlighted during the investigation. We are considering whether these warrant further attention.

3.4 We will make a final decision on our 2019/20 work programme in June 2019.

4 Five participants claimed a UTS started on 15 September 2018 and was ongoing at the time of the claim

4.1 On 8 November 2018 we received a UTS claim by Electric Kiwi, Flick Energy, Pulse Energy, Switch Utilities (Vocus), and Vector (the 'claimants'). The claim is attached as Appendix A.

4.2 The claimants said the situation was materially different from previous UTS claims because it resulted from a confluence of factors, being:

(a) potential force majeure events impacting gas supply

(b) failure of market making in the hedge market, which the claimants say is a UTS in itself. The claimants say the failure indicates the exercise of co-ordinated market power and is reflected in the withdrawal of the four largest gentailers from their voluntary ASX market maker obligations. The claimants also say this caused independent retailers and industrial consumers to be unable to procure hedging cover at predictable, reasonable prices

(c) sustained atypically high spot prices that appeared to be at least partly caused by the co-ordinated exercise of market power. Regardless of the cause, the claimants considered the high spot prices constituted a UTS

(d) a blatant disregard for information disclosure obligations. The claimants stated a number of participants had not complied with Code requirements to disclose information they had about themselves that they expect would have a material impact on prices in the wholesale market, if it became public.

4.3 On 19 November 2018 the claimants provided further information in response to a request to clarify aspects of the claim. Our questions and the claimants' response are attached as Appendix B.

4.4 Fonterra, Oji Fibre Solutions, and Ecotricity requested to join the claim and/or publicly signalled their support for the claim. These requests were noted but these additional parties were not formally added as claimants.

5 Undesirable trading situation is defined in the Code

5.1 Undesirable trading situation is defined in clause 1.1 of the Code as:

any situation—

[3] The report is on our website: https://www.ea.govt.nz/monitoring/enquiries-reviews-and-investigations/2017/winter-2017-review/.

(a) that threatens, or may threaten, confidence in, or the integrity of, the **wholesale market**; and

(b) that, in the reasonable opinion of the **Authority**, cannot satisfactorily be resolved by any other mechanism available under this Code (but for the purposes of this paragraph a proceeding for a breach of clause 13.5A is not to be regarded as another mechanism for satisfactory resolution of a situation).

5.2 The wholesale market is defined in clause 1.1 of the Code as:

(a) the spot market for **electricity**, including the processes for setting—

(i) **real time prices**:

(ii) **forecast prices** and **forecast reserve prices**:

(iii) **provisional prices** and **provisional reserve prices**:

(iv) **interim prices** and **interim reserve prices**:

(v) **final prices** and **final reserve prices**:

(b) markets for **ancillary services**:

(c) the hedge market for **electricity**, including the market for **FTRs**.

5.3 Clause 5.1 of the Code provides that:

(1) If the **Authority** suspects or anticipates the development, or possible development, of an **undesirable trading situation**, the **Authority** may investigate the matter.

(2) The following are examples of what the **Authority** may consider to constitute an **undesirable trading situation**:

(a) manipulative or attempted manipulative trading activity:

(b) conduct in relation to trading that is misleading or deceptive, or is likely to mislead or deceive:

(c) unwarranted speculation or an undesirable practice:

(d) material breach of any law:

(e) a situation that threatens orderly trading or proper settlement:

(f) any exceptional or unforeseen circumstance that is contrary to the public interest.

(3) To avoid doubt,—

(a) the list of examples in subclause (2) is not an exhaustive list, and does not prevent the **Authority** from finding that an **undesirable trading situation** is developing or has developed in other circumstances; and

(b) an example listed in subclause (2) does not constitute an **undesirable trading situation** unless the example comes within the definition of that term in Part 1.

5.4 Clause 5.2 of the Code provides that:

(1) If the **Authority** finds that an **undesirable trading situation** is developing or has developed, it may take any action that—

(a) the **Authority** considers necessary to correct the **undesirable trading situation**; and

(b) relates to an aspect of the **electricity** industry that the **Authority** could regulate in this Code under section 32 of the **Act**.

(2) The actions the **Authority** may take under subclause (1) include any 1 or more of the following:

(a) directing that an activity be suspended, limited, or stopped, either generally or for a specified period:

(b) directing that completion of trades be deferred for a specified period:

(c) directing that any trades be closed out or settled at a specified price:

(d) directing a **participant** to take any actions that will, in the **Authority's** opinion, correct or assist in overcoming the **undesirable trading situation**.

5.5 Clause 5.5 of the Code provides that:

> The **Authority** must attempt to correct every **undesirable trading situation** and, consistently with section 15 of the **Act**, restore the normal operation of the **wholesale market** as soon as possible.

5.6 For a situation to be categorised as a UTS it must meet the criteria set out in paragraphs (a) and (b) of the definition, as set out in paragraph 5.1. That is, it threatens, or may threaten, confidence in, or the integrity of, the wholesale market *and* it must not be able to be resolved by any other mechanism available under the Code. The definition also provides that a proceeding for a breach of the trading conduct provisions in clause 13.5A is not another mechanism for satisfactory resolution of a situation.

5.7 Read together with clause 5.5, which refers to the restoration of normal market operations after a UTS has occurred, a UTS must be a situation outside of the normal operation of the wholesale market and it must require us to take some corrective action. If there would be no threat, or if the situation does not require corrective action, the situation is not a UTS.

5.8 A UTS may exist even if there is no Code breach, and a Code breach may occur without a UTS arising.

6 We considered our statutory objective

6.1 While the Code sets out the legal framework within which our consideration of a UTS must occur, our interpretation of our statutory objective provides an economic context.

6.2 Our statutory objective in section 15 of the Electricity Industry Act 2010 (Act) provides as follows:

> The objective of the Authority is to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.

6.3 We interpret our statutory objective as requiring us to exercise our functions set out in section 16 of the Act in ways that, *for the long-term benefit of electricity consumers*:[4]

(a) facilitate or encourage increased competition in the markets for electricity and electricity-related services, taking into account long-term opportunities and incentives for efficient entry, exit, investment and innovation in those markets

(b) encourage industry participants to efficiently develop and operate the electricity system to manage security and reliability in ways that minimise total costs whilst being robust to adverse events

(c) increase the efficiency of the electricity industry, taking into account the transaction costs of market arrangements and the administration and compliance costs of regulation, and taking into account Commerce Act implications for the non-competitive parts of the electricity industry, particularly in regard to preserving efficient incentives for investment and innovation.

6.4 The interpretation of our statutory objective also sets out that we consider the 'normal' operation of the wholesale market to be *workably competitive* (and not perfect). Our interpretation relevantly states:

> In reality competition is not necessarily orderly or constant over time. There can be periods when competition declines as competitors exit markets as they discover they are unable to operate profitably, and this can happen in a disorderly manner. There can also be situations when competition appears weak because firms can charge prices above competitive levels until new suppliers enter the market or consumers find ways to reduce demand, either temporarily or permanently.

Economic rationale for UTS provisions

6.5 The economic rationale for UTS-like provisions is to achieve operationally efficient and competitive markets. In voluntary marketplaces, market providers strive to attract buyers and sellers by adopting rules that promote operationally efficient trading and rules aimed at giving buyers and sellers confidence in the market.

6.6 Market providers adopt rules aimed at giving buyers confidence that suppliers' goods and services are what they say they are, contract terms are transparent and prices are competitively determined. Likewise, market providers adopt rules aimed at giving sellers confidence that buyers are genuine and will meet their payment terms. Undesirable practices by a few buyers and sellers harm other market users, and they also harm the market provider by deterring some parties from using the market.

6.7 UTS-like provisions are adopted by market providers because they cannot foresee all future eventualities and hence cater for these in the market's rules. Also, some practices are particularly difficult to specify in the rules, and so are better covered by generic UTS-like rules.

6.8 Market providers have strong incentives to enforce UTS provisions to further the efficient operation of the market and build confidence in it. UTS provisions often give broad discretion to market providers to deal with practices that threaten trading on the market, such as practices that disrupt orderly trading or the proper settlement of trades. Having

[4] Our interpretation of our statutory objective is on our website: https://www.ea.govt.nz/about-us/strategic-planning-and-reporting/foundation-documents/.

the ability in certain circumstances to constrain the commercial decisions or actions of market participants is common to most organised markets.

Connection with our statutory objective

6.9 Based on the general economic rationale for UTS provisions given above, the UTS provisions in the Code are consistent with facilitating and encouraging competition and increasing the efficiency of the electricity industry.

7 We investigated what occurred in the wholesale market over an extended period

7.1 This section sets out the scope of our investigation, being the time period we looked at, and the conduct and features of the markets we considered, in determining whether or not a UTS exists.

We can look at what occurred in the wholesale market regardless of when it occurred

7.2 We can initiate an investigation if we suspect or anticipate the development, or possible development of, a UTS. Clause 5.1A of the Code states:

> Despite clause 5.1(1), the **Authority** must not commence an investigation if more than 10 **business days** have passed since the situation, which the **Authority** suspects or anticipates may be an **undesirable trading situation**, occurred.

7.3 We consider that clause 5.1A places limits on when we can *begin* an investigation, but has no other effect.

7.4 Although some aspects of the alleged UTS occurred earlier than 10 business days before the claim was made, the claimants allege that the UTS was continuing at the time the claim was made on 8 November 2018.

7.5 We accept that the claimants were legitimately concerned that a UTS was ongoing at the time they made their claim. Accordingly, we were able to initiate our investigation on 9 November 2018, within the 10 business day period. Once the investigation started, clause 5.1A did not limit the scope of our investigation (that is, we could investigate events that took place earlier than 10 business days before the investigation started).

7.6 We were also able to consider relevant matters that occurred before the start of the alleged UTS (that is, that occurred before 15 September 2018).

7.7 We added a time limit on initiating UTS investigations in 2013. In our decision paper we noted our reasons for introducing such a time limit included that:[5]

> it is extremely unlikely that a situation of sufficient materiality to constitute a UTS would go unnoticed for any extended period
>
> …
>
> the UTS provisions should not be relied upon as a fix-all in place of Code amendments. The Authority expects that any situation that has gone unnoticed for a sustained period is likely to be more appropriately handled by amending the Code on a prospective basis

[5] The decision paper is on our website: https://www.ea.govt.nz/dmsdocument/15156-decision-paper-uts-provisions-amendment.

7.8 Although we have decided to investigate the claim, we consider that the reasons for including the time limit are relevant to our consideration of the matters alleged in the claim.

We investigated the period from 14 September 2018 to 1 November 2018

7.9 The claimants chose 15 September 2018 as the start of the alleged UTS because their analysis showed that gas shortages at Pohokura started at or around this time.[6] We chose to start the investigation period on 14 September 2018 because this is when publicly available data show the shortage at Pohokura started.

7.10 1 November 2018 is the start of a period of significant inflows to hydro lakes that resulted in hydro storage reaching near average levels in early December 2018. Significant inflow events occurred on 2 November 2018 and 8 November 2018 which together increased South Island storage by 700GWh. We chose 1 November 2018 as the end of the investigation period because the hydro flows significantly addressed the fuel supply shortage caused by the Pohokura gas outage.

7.11 Some of the factors cited by the claimants as causing a UTS continued after 1 November 2018 (for example, high spot prices and wide bid-ask spreads on the ASX). However, we are confident that 14 September 2018 to 1 November 2018 (the 'investigation period') captures the key events that the complainants allege contribute to a UTS existing. An end date for the investigation is necessary from a practical point of view and to promote confidence in the market, even though the claimants allege the UTS was 'ongoing' at the time of their claim.

Alleged non-compliance with the Code and other laws is being dealt with separately

7.12 The claimants make several allegations that other participants breached the Code.

7.13 Our investigation was limited to considering whether there is a UTS. As noted below, our compliance team is investigating potential non-compliance with information disclosure obligations in the Code in accordance with the Code breach process in the Electricity Industry (Enforcement) Regulations 2010.

7.14 The claimants allege conduct by other participants that may breach laws other than the Code. For example, conduct that may breach the Australian securities law relating to trading hedges based on inside information.

7.15 We have referred those allegations to ASIC and will provide ASIC with further assistance as required.

We took two approaches in our investigation

7.16 The claimants allege a 'confluence of factors' caused a UTS, and that some of those factors constituted a UTS on their own. Our first approach was to consider those factors. In doing so, we determined whether those factors existed and to what extent. We then determined whether each of those factors, if they existed, threatened confidence in, and integrity of, the wholesale market.

7.17 Our second approach was to test whether a UTS existed by analysing indicators of confidence in, and integrity of, the wholesale market. In particular, we looked at

[6] Appendix A, page 4.

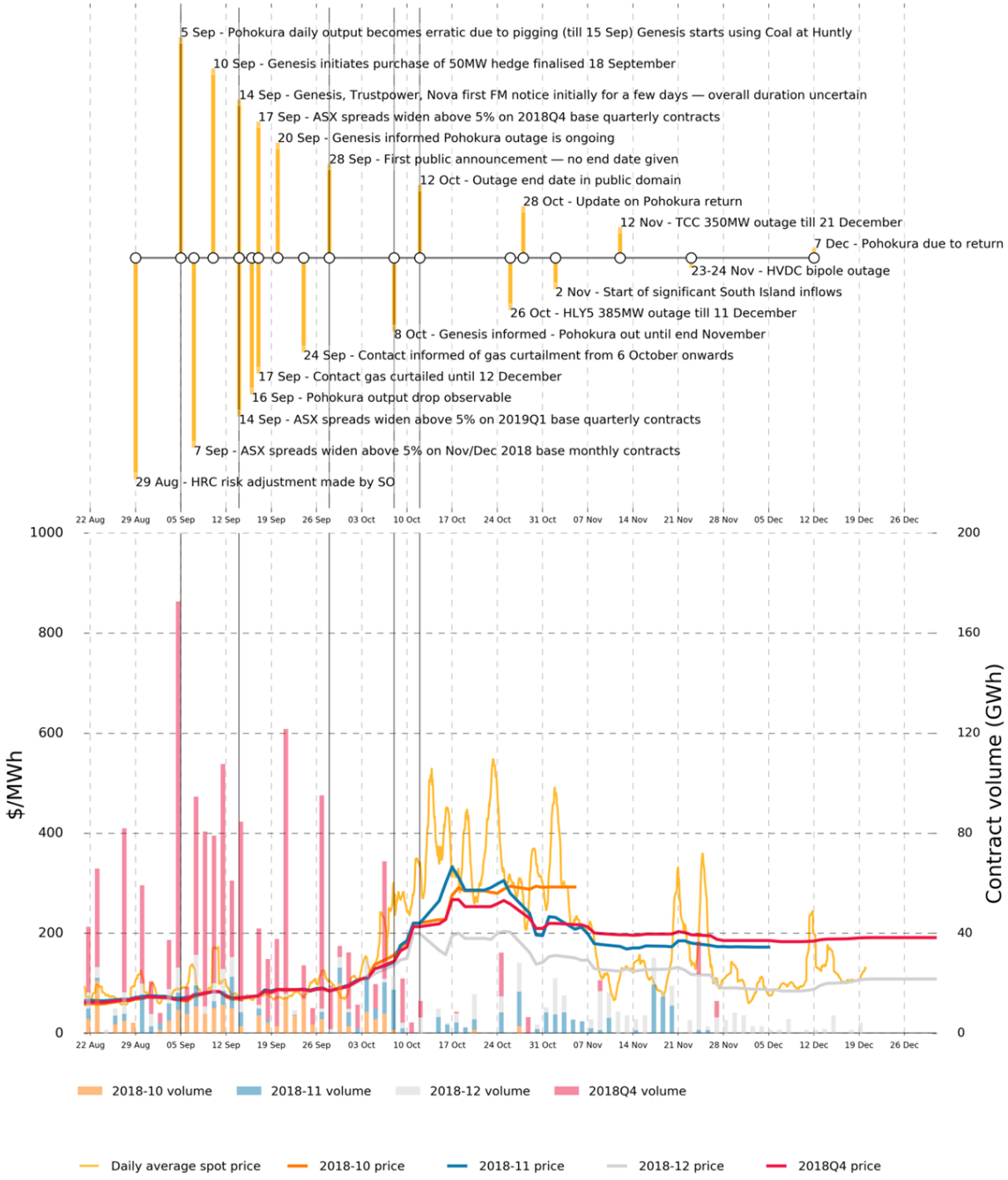
indicators of confidence and integrity in the spot and hedge markets to test whether a UTS existed in relation to the investigation period. This analysis took place independently of our assessment of the factors in our first approach.

7.18 In reaching our decision, we considered the evidence produced from our two investigative approaches, and considered whether the evidence, individually, in combination, or as a whole, supported a finding that a UTS existed.

8 Wholesale market conditions over the investigation period were unusual

8.1 Wholesale market conditions over the investigation period can be characterised as unusual. For example, some outcomes in the hedge and spot markets reached record, or near record, levels. This section sets out some of the key factors affecting wholesale market conditions during the investigation period, to provide background for our analysis in sections 9 and 10. Figure 1 below shows the material events in chronological order.

Figure 1: Timeline of material events



Spot market prices

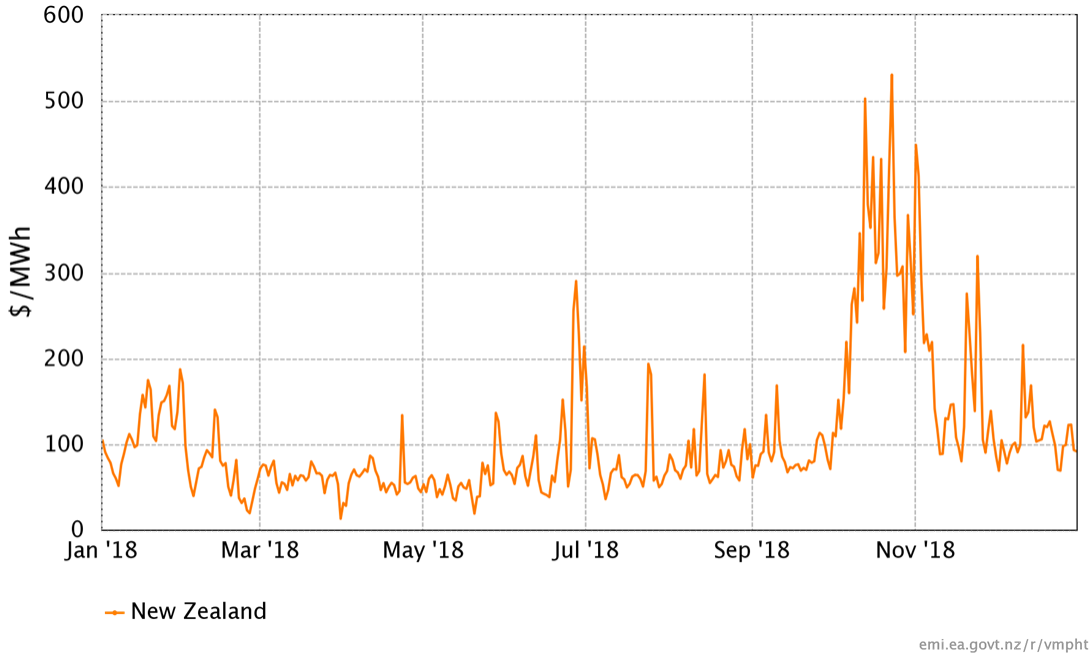
8.2 The average annual spot price in New Zealand is around $80/MWh.[7] However, this figure does not capture significant yearly, monthly, weekly, and half-hourly fluctuations that occur as supply and demand vary in real time.

8.3 In 2018 the simple average spot price was $95.97/MWh. However, over the investigation period, spot prices were significantly higher than forecast, and significantly higher than previous comparable periods, across the whole country. The simple average daily spot price for 2018 up to 15 September was $78/MWh. From 1 October 2018 the simple daily

[7] After adjusting all prices to 2018 dollars.

average wholesale price across New Zealand rose above $100/MWh and did not fall below that price until 10 November 2018. It reached as high as $530.67/MWh on 23 October 2018. Figure 2 below shows the simple New Zealand daily average spot price for 2018.

Figure 2: Simple daily average spot prices



8.4 To provide context, the average spot price in October 2018 was $293/MWh. This is over twice the next highest October price on record. Further, spot prices in October 2018 were the fifth highest monthly average spot price on record.[8]

8.5 The high spot prices in October 2018 were not forecast, as hedge contracts for October 2018 were trading at approximately $100/MWh at the start of that month. Figure 3 below shows the price of the Otahuhu October 2018 monthly contract over time. The equivalent contract at Benmore shows a similar pattern.

[8] After adjusting all prices to 2018 dollars.

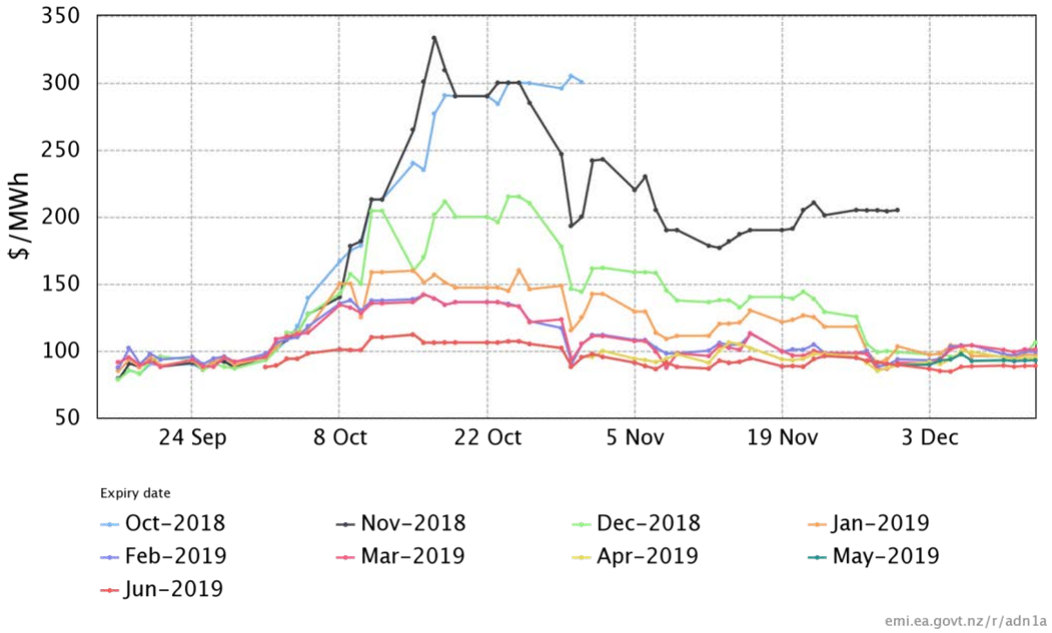
Figure 3: Settlement price trends Otahuhu October 2018

8.6 Spot prices from the end of the investigation period until the end of 2018 dropped considerably and averaged $126.49/MWh.

Hedge market conditions

8.7 Conditions in the market for ASX New Zealand electricity hedges were noticeably affected during the investigation period. As shown above in Figure 3, the price of October 2018 contracts on the ASX increased over the course of October in response to an increase in actual and expected spot prices. As shown in Figure 4 below, prices for all available monthly contracts increased at times throughout the investigation period. This can be interpreted as an expectation (or uncertainty) that high spot prices would continue through early 2019.

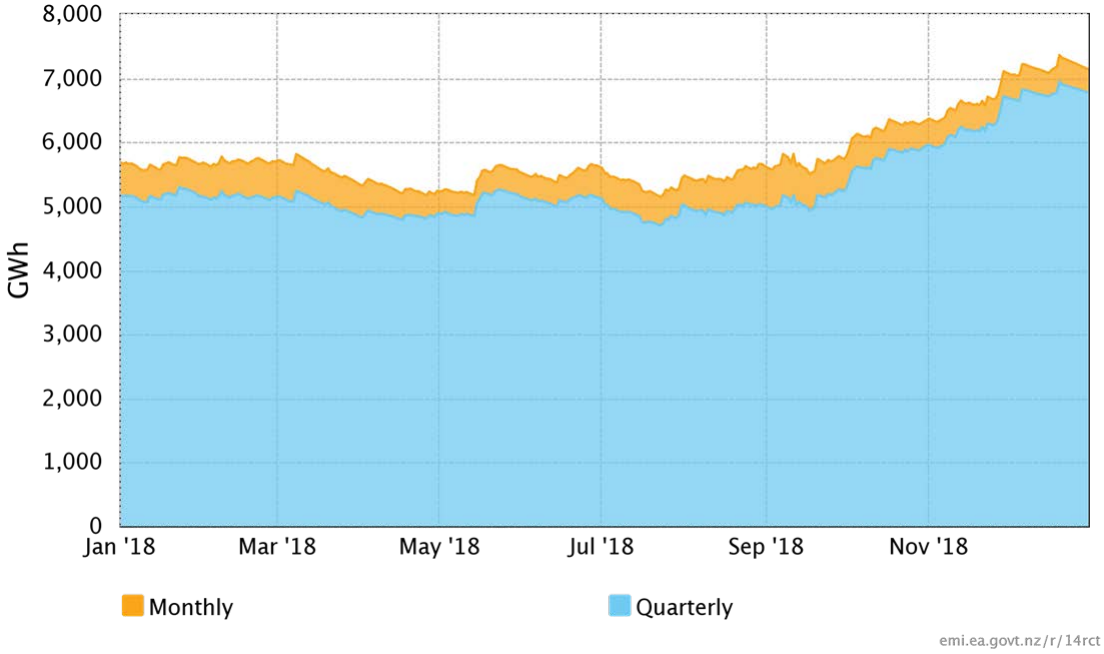
Figure 4: Settlement price trends for monthly contracts at Otahuhu



8.8 Over the investigation period, measures of liquidity in ASX products produced mixed results.

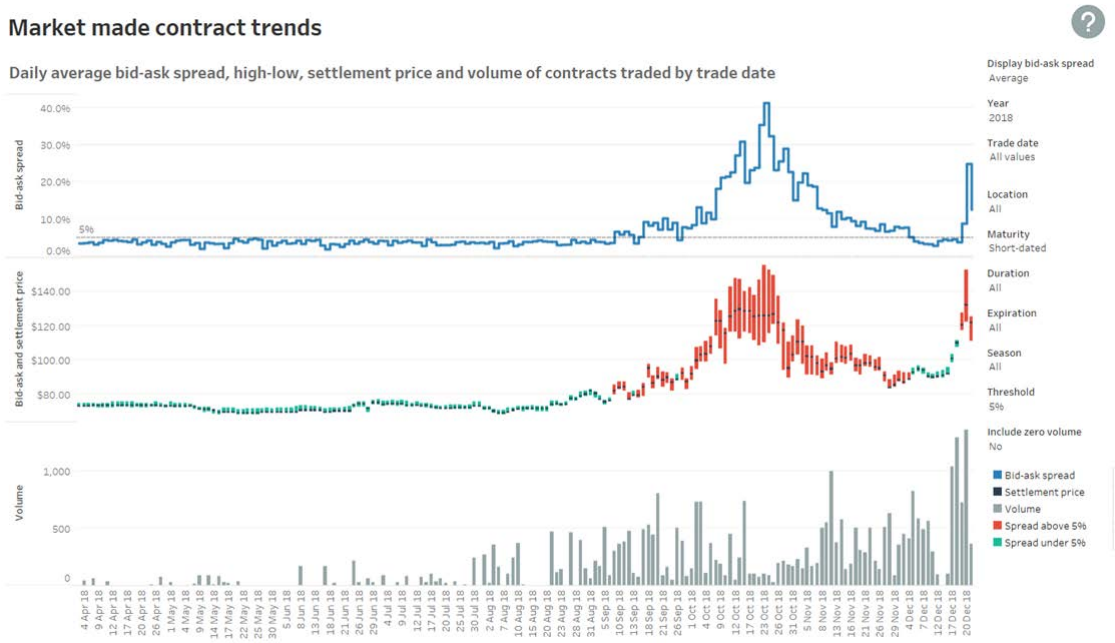
8.9 Unmatched open interest (UOI) increased over 2018, and increased particularly rapidly during the investigation period, as shown in Figure 5 below. A record high UOI of 7,361GWh was set on 20 December 2018. This indicates that parties were still willing to trade despite unusual conditions in the wholesale market.

Figure 5: ASX unmatched open interest 2018



8.10 However, bid-ask spreads for all ASX contracts expiring within 12 months widened above 5% at times throughout the investigation period, before returning to 5% or below in early December. This can be seen in Figure 6 below.

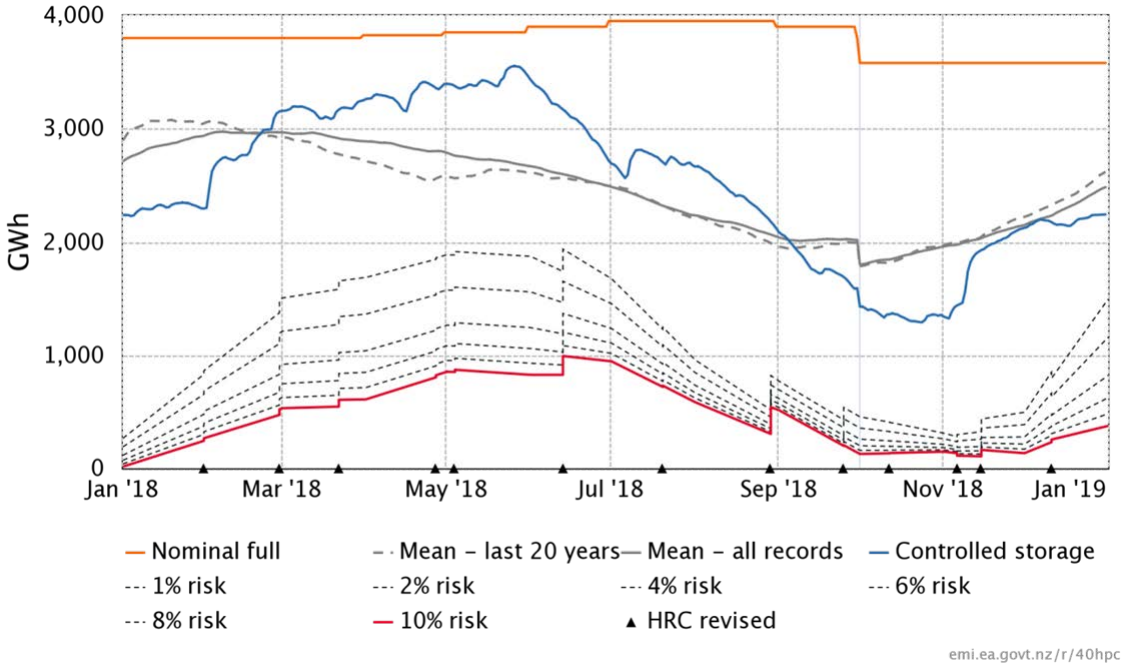
Figure 6: Trends for short-dated market made contracts



Hydro fuel availability

8.11 The availability of water to run hydro generators is a significant factor affecting spot prices in New Zealand. In the months leading up to the investigation period hydro inflows across New Zealand were higher than average. However, as shown in Figure 7 below, at the start of October 2018 controlled hydro storage for the whole of New Zealand was significantly lower than average and had been falling rapidly since early August 2018.

Figure 7: Controlled hydro storage and hydro risk curves 2018



8.12 Normal market behaviour is for prices to increase as storage decreases. The increased prices make it economic for thermal generation to operate, resulting in reduced hydro generation, which conserves water. The behaviour and outcomes can be seen in Figure 30 and Figure 31 below.

A step-change to hydro risk curves

8.13 On 29 August 2018 the system operator corrected a long-standing error that had resulted in it systematically under calculating the risk of a dry year energy shortfall.[9] The error resulted in the system operator incorrectly modelling environmental restrictions on Lake Tekapo storage during the summer months (between 1 October and 31 March each season). The effect of this change in 2018/19 can be seen in the sharp drop in the 'nominal full', 'mean – last 20 years', 'mean – all records', and 'available hydro storage' lines at 1 October in Figure 7 above.

8.14 This error has been investigated by our compliance team.[10]

8.15 Correcting the error increased the apparent risk of hitting the 10% HRC (which initiates an official conservation campaign[11]) during those months. The effect of increasing the

---

9 This change is explained further on the system operator's website: https://www.transpower.co.nz/system-operator/security-supply/hydro-risk-curves.

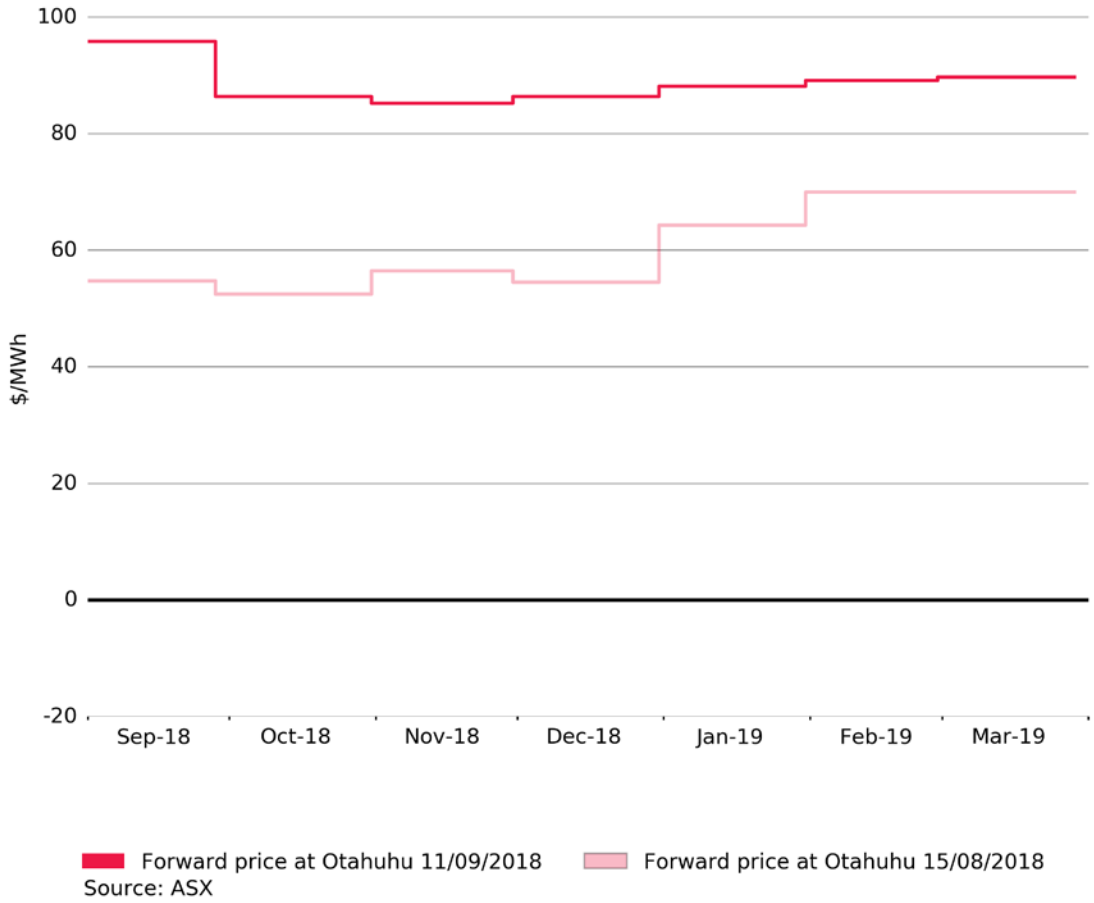
10 The notice of our decision is on our website: https://www.ea.govt.nz/code-and-compliance/compliance/decisions/investigations-closed-no-settlement-reached/.

11 We provide more information on official conservation campaigns on our website: https://www.ea.govt.nz/operations/wholesale/security-of-supply/security-of-supply-policy-framework/.

apparent risk can be seen in changes to the forward price curve after 29 August 2018. Figure 8 and Figure 9 show the reaction of the forward curves to the changes in the HRCs.

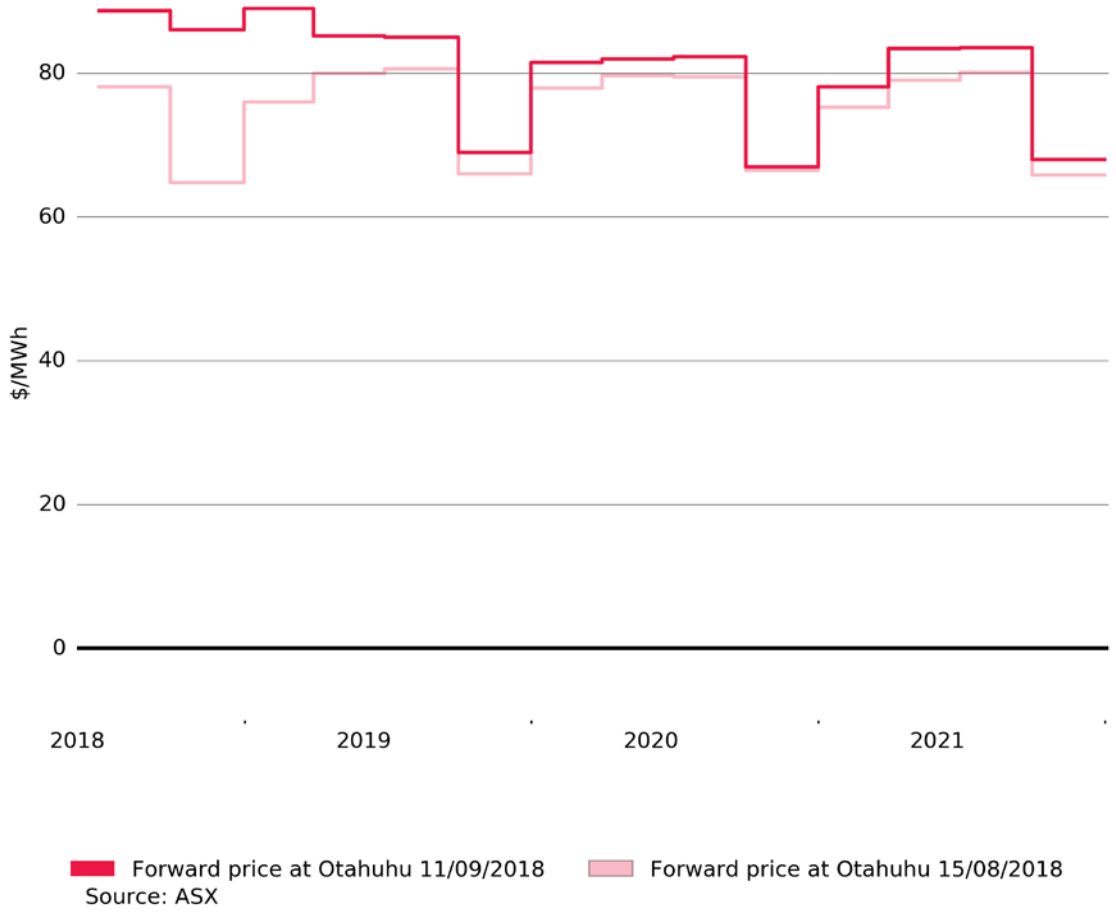
8.16 Figure 8 shows an increase in the entire curve for monthly contracts for Otahuhu. The equivalent contract at Benmore shows a similar pattern. This increase is around $20/MWh for the investigation period. This analysis is indicative in the sense that we cannot attribute the shift in the monthly curve solely to changes in the HRCs. However, the direction of change is consistent with it being caused by the change in the HRCs. We are not aware of any other events in the relevant period that might have caused such a shift. In particular, the change occurred before gas supplies were curtailed.

Figure 8: Monthly forward curves before and after the HRC changes



8.17 Figure 9 shows a significant increase in the 2018 Q4 contract at Otahuhu which coincides with the investigation period. The equivalent contract at Benmore shows a similar pattern.

Figure 9: Quarterly forward curves before and after HRC changes

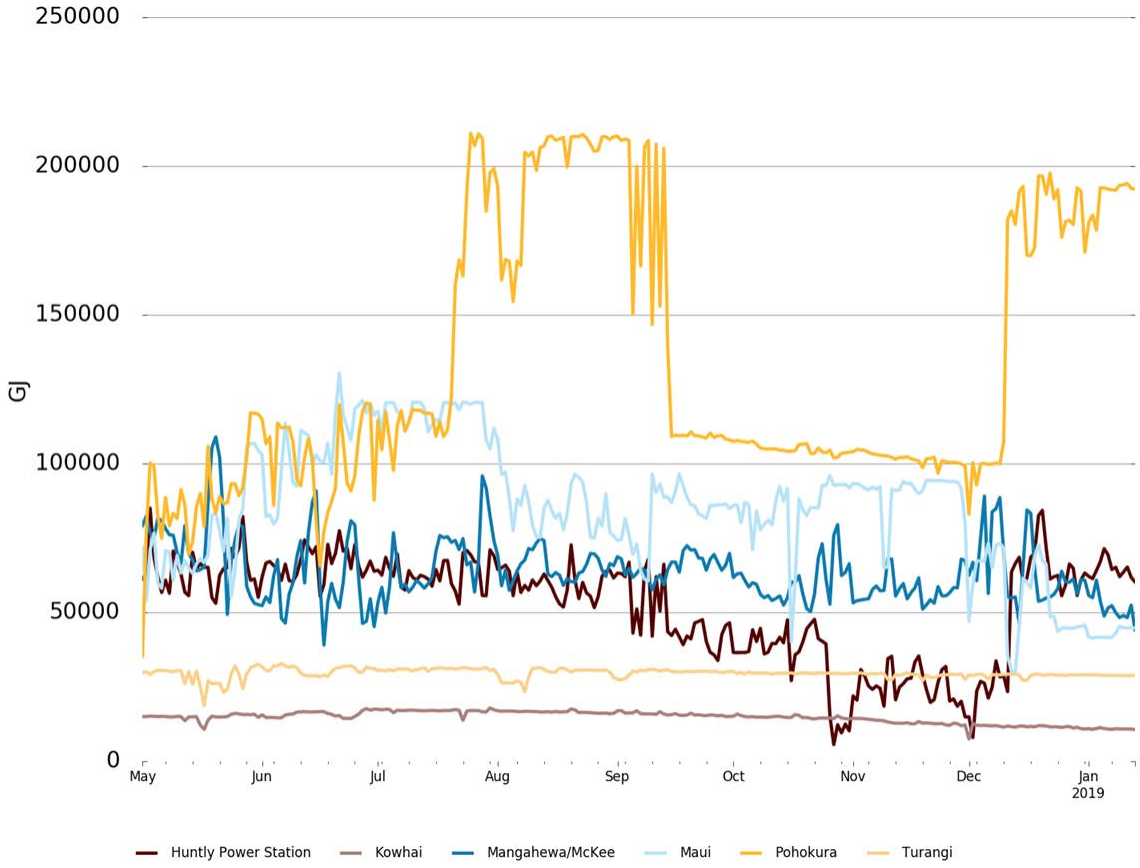


Source: ASX

Thermal fuel availability

8.18 Pohokura is New Zealand's highest producing gas field. In 2017 it produced an average of approximately 219,000GJ/day of gas. Gas production from Pohokura in 2018 can be seen in Figure 10 below. Production from Pohokura in 2018 was unreliable. From March to July 2018 volume reduced to approximately 100,000GJ/day as a result of a pipeline repair.

Figure 10: Daily gas supply and consumption 2018[12]



8.19 After a return to high production at Pohokura in August 2018, an issue was discovered with a valve on the offshore platform, resulting in reduced output of 100,000GJ/day from 14 September 2018. This is a significant amount of gas: a CCGT such as Huntly unit 5 (e3p) can consume approximately 65,000GJ/day at full capacity and produce approximately 8GWh or 8% of national daily demand. The valve issue was resolved in early December 2018 and production returned to approximately 200,000GJ/day for the remainder of the 2018 calendar year.

8.20 The effect of thermal fuel availability on thermal generation can be seen in Figure 11 below.

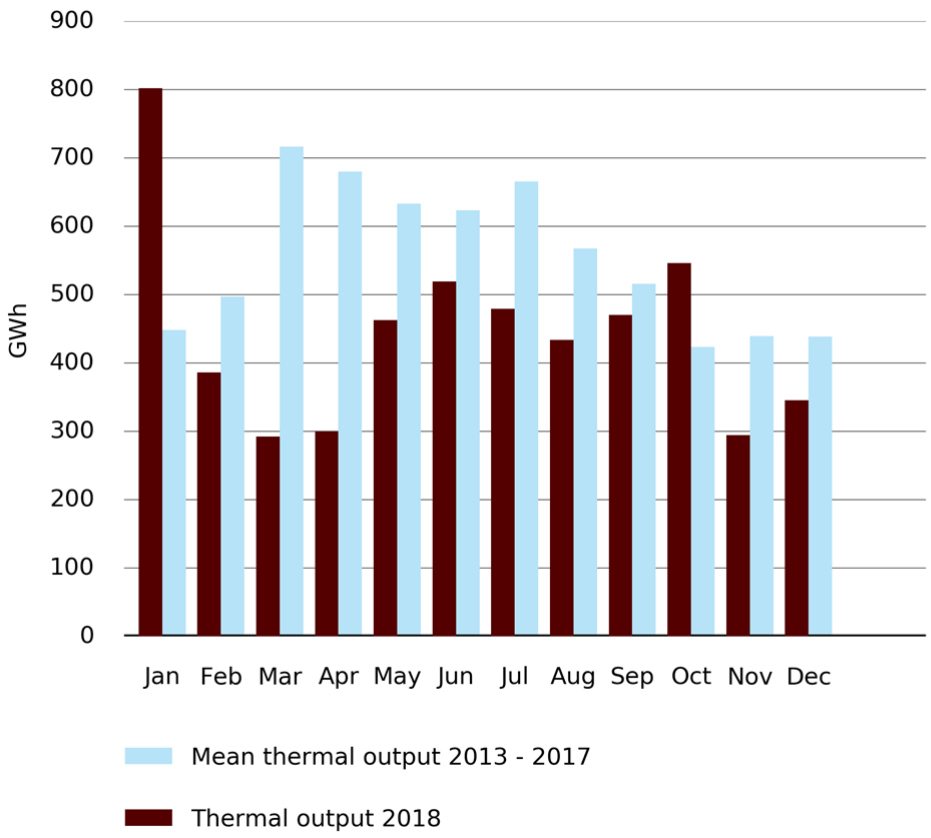
8.21 Hydro storage was relatively low in January 2018, as seen in Figure 7 above. This resulted in increased spot prices (as seen in Figure 2 above). The higher spot prices made it economic for thermal generators to produce electricity, resulting in increased thermal output observable in the January 2018 bar in Figure 11. Hydro storage increased from February 2018, spot prices fell and thermal output also fell below average. This interaction between hydro storage, spot prices and thermal generation is normal market behaviour.

8.22 In October 2018 hydro storage was again below average and prices were significantly higher than in January 2018, but there is not a comparable increase in thermal output. This appears to be the result of the gas shortage preventing gas fired thermal generation

[12] Source: Gas Industry Company.

from running in October 2018. The data below on thermal generation includes coal fired generation– the results would be even starker if coal were excluded.

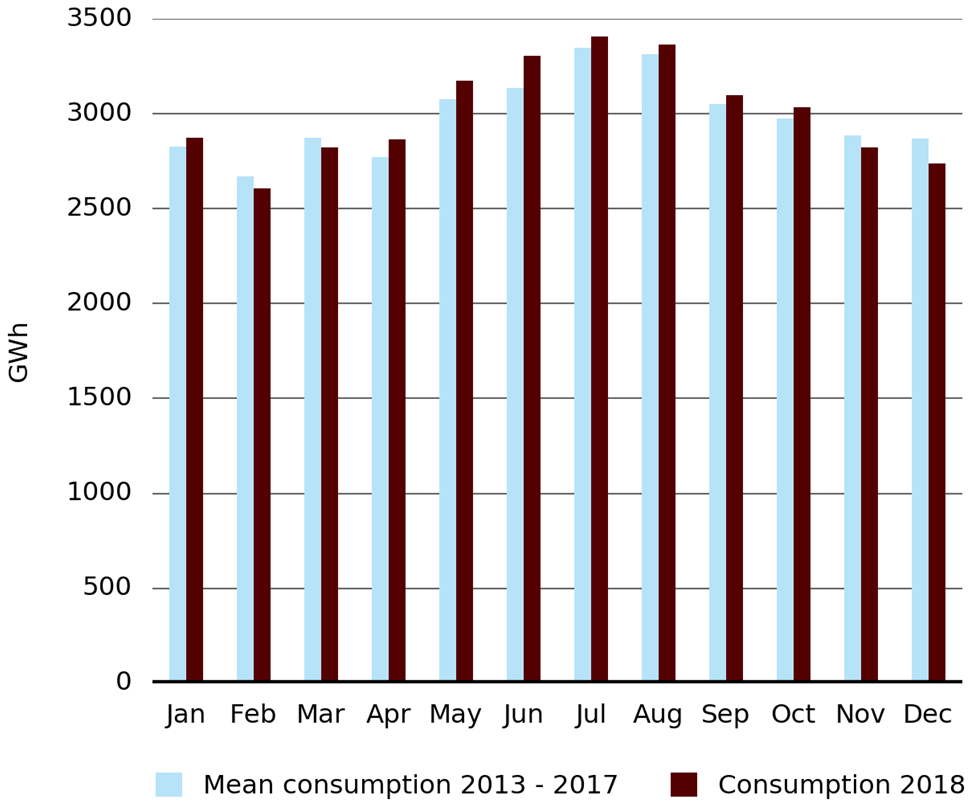
Figure 11: Thermal output



Demand

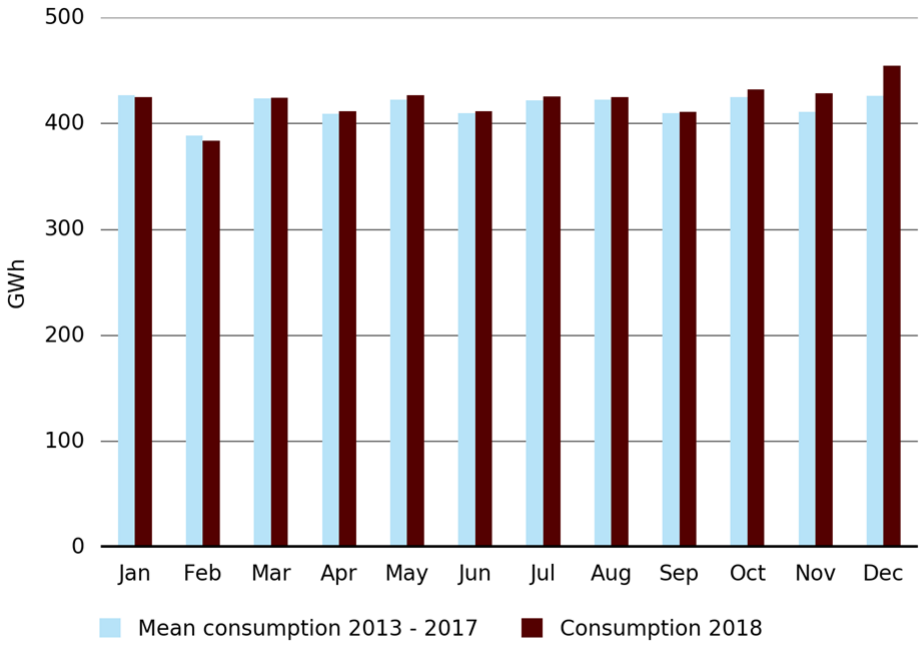
8.23 Electricity demand in October 2018 was higher than the average for the previous five years. Figure 12 below shows monthly consumption in 2018 compared to average monthly consumption for the previous five years. The chart excludes demand at Tiwai.

Figure 12: Monthly consumption (excluding Tiwai)



8.24 Figure 13 below shows demand at Tiwai which was also high in October 2018. The smelter increased production during the week beginning 24 September 2018 as a fourth pot line was re-energised.

Figure 13: Tiwai demand



Default of small retailer

8.25 During the investigation period a small retailer (Payless Energy) failed to meet its prudential and settlement obligations under the Code. Payless could not correct the default and subsequently exited the market. This is the first example of a serious default under the Code.[13] There were also public statements from another small trader, Power Direct, stating it has required its customers to switch to other retailers. Additionally, there were comments in the media, and by the claimants in their claim, that other traders would also likely default or exit the market as a result of conditions in the wholesale market. We have not seen any evidence of this occurring.

9 We analysed each of the factors in the claim

9.1 As outlined above, the investigation considered each of the factors the claimants put forward for a UTS existing. For each of the factors, we considered whether the factor exists, and if it does, whether that factor has negatively affected wholesale market confidence and integrity. The factors we considered are:

(a) tacit collusion in the spot and hedge market (page five of the claim, paragraph 3(a) of the clarification letter)

(b) non-compliance with information disclosure obligations (page five of the claim, paragraph 3(d) of the clarification letter)

(c) hedge market failures (page four of the claim, paragraph 3(c) of the clarification letter)

(d) high spot prices (page five of the claim, paragraph 3(b) of the clarification letter)

[13] It is not uncommon for traders to be in 'default' for a matter of hours or days as a result of, for example, banking errors.

(e) potential force majeure events impacting gas supply (page four of the claim).

9.2 The claimants also considered that a UTS exists as a result of a confluence of all the above factors. We have considered this aspect of the claim as part of the conclusion of the investigation which considers all the evidence of the investigation as a whole.

We did not find evidence of tacit collusion

9.3 The UTS claim alleged that generator/retailers were colluding in both the spot and hedge market. In a letter dated 19 November 2018 (Appendix B) the claimants clarified that the allegation relates to tacit collusion. Accordingly, as part of the investigation we have considered whether there is evidence of tacit collusion in the wholesale market.

9.4 Collusion is an anti-competitive practice that occurs when competitors choose not to compete with each other. This can occur because of an express agreement between the competitors. However, it can also occur if each competitor independently chooses to take actions that are likely to minimise competitive pressure in the market—this is tacit collusion.[14]

9.5 The essence of tacit collusion is that given a high price, competitors prefer to not undercut their competition to gain market share. Such a situation is characterised by stability because to sustain the tacit collusion, each competitor adopts a strategy of 'I won't undercut competitors as long as they do not undercut me'. Markets with tacit collusion do not exhibit the kind of competition where price is reduced to capture greater market share.

9.6 Tacit collusion is more likely in stable and predictable markets, and less likely in dynamic and unpredictable ones. This is because tacit collusion relies on firms being able to reach equilibrium through repeated interactions within a stable context *without explicit communication*. If they succeed then the equilibrium will mean higher profits for all firms.

9.7 Therefore in this section we look at:

(a) measures of stability and trading activity

(b) how spot prices evolved during pre-dispatch.

9.8 In the first case we found the market was less stable than (or just as stable as) normal and that trading activity was not out of the ordinary. In the second case we found that prices fell during pre-dispatch indicating that generators were reducing their offer prices—or increasing the volume of energy generated at low prices—to capture volume. This is the opposite of what we would expect to observe if there were tacit collusion—a high price in pre-dispatch schedules would be maintained to eventually be the final price.

9.9 We conclude that there is no evidence of tacit collusion, and that market conditions over the investigation period were inconsistent with tacit collusion occurring.

Spot prices were not stable

9.10 If tacit collusion were occurring, we would expect spot prices to remain stable and predictable. Figure 14 and Figure 15 below show that spot prices at Benmore and

[14] Tacit collusion is covered in the part of economics called industrial organisation or the theory of the firm. Most modern literature is game theoretic. A good example is chapter 6 of The Theory of Industrial Organization, Tirole J. which contains a simple characterisation of tacit collusion, a summary of the literature and the factors that facilitate and hinder tacit collusion. Also see Tacit Collusion the Neglected Experimental Evidence, Christoph Engle, for a meta study of experimental evidence of the relative effects on collusion of different contributing factors.

Otahuhu were volatile over the investigation period. This is inconsistent with tacit collusion occurring.

Figure 14: Benmore and Otahuhu spot prices 2018

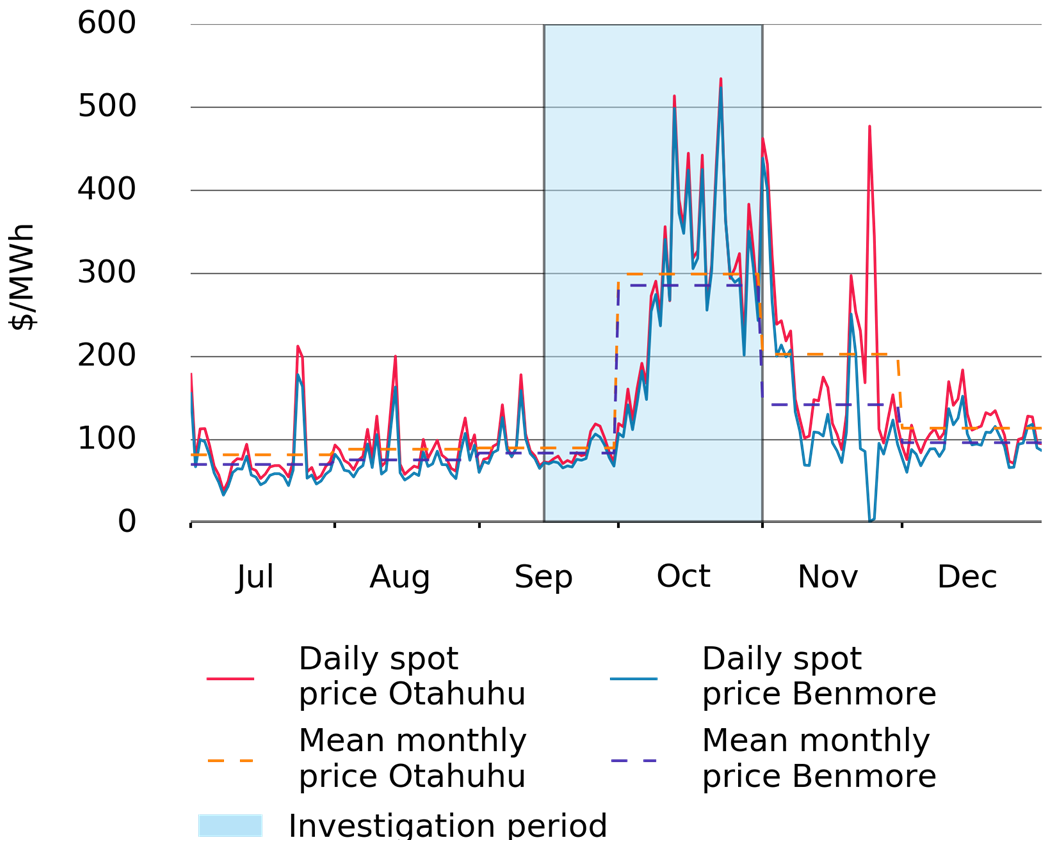
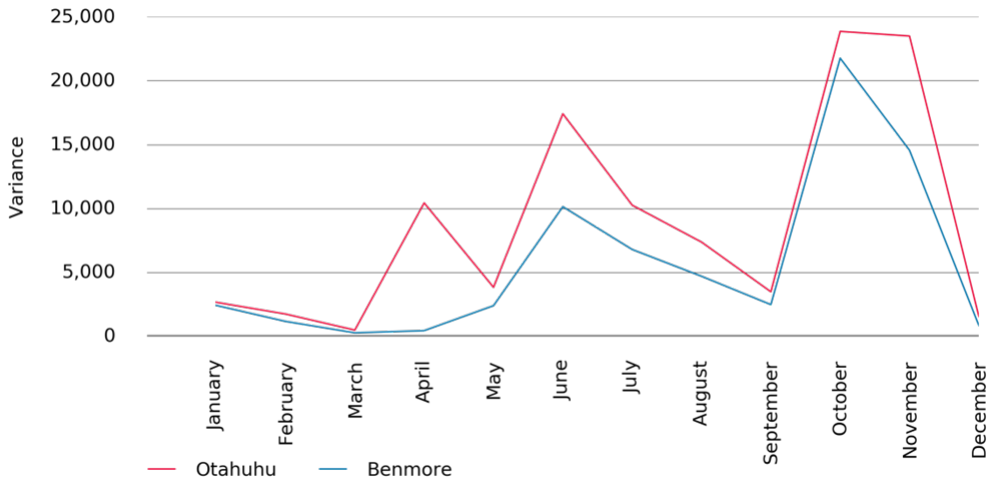


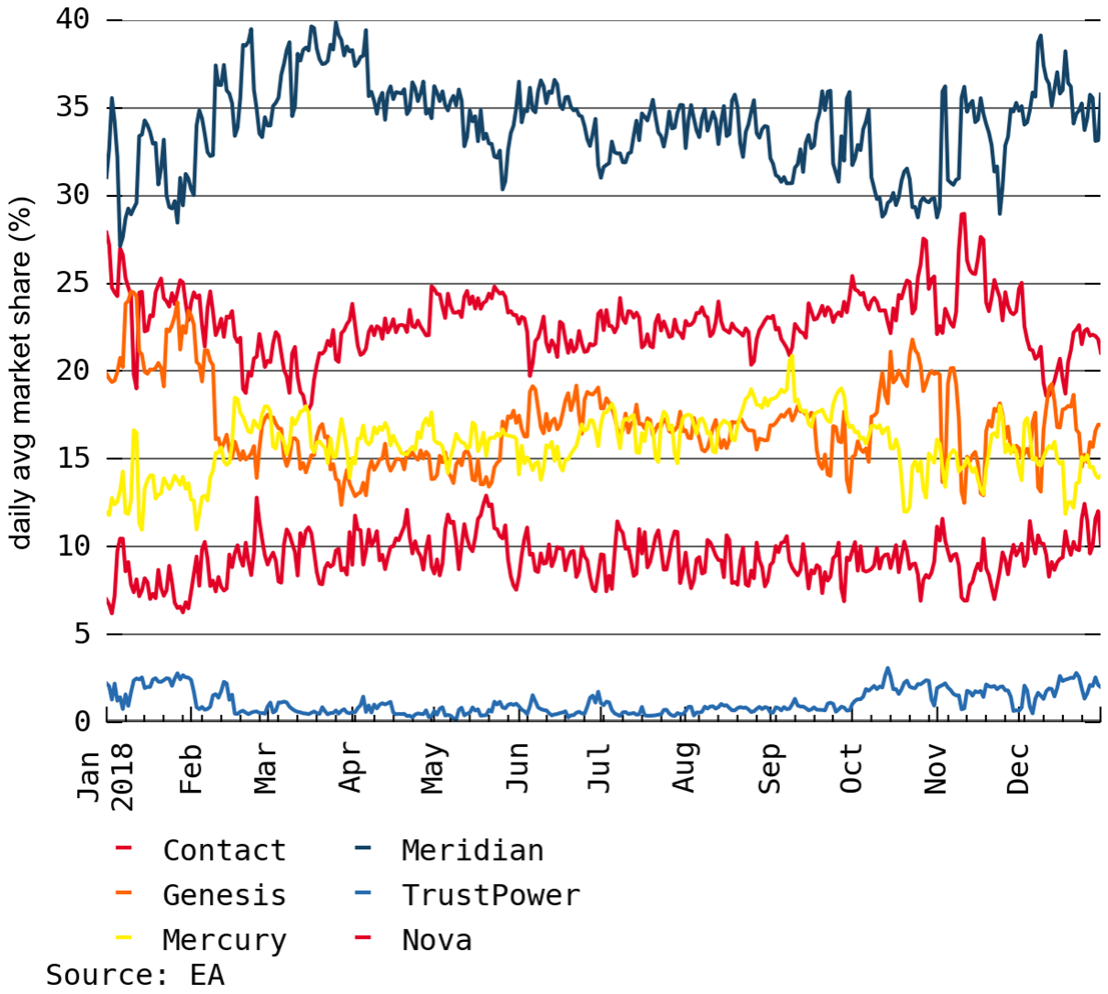
Figure 15: Spot price volatility at Benmore and Otahuhu 2018



Market share was not stable

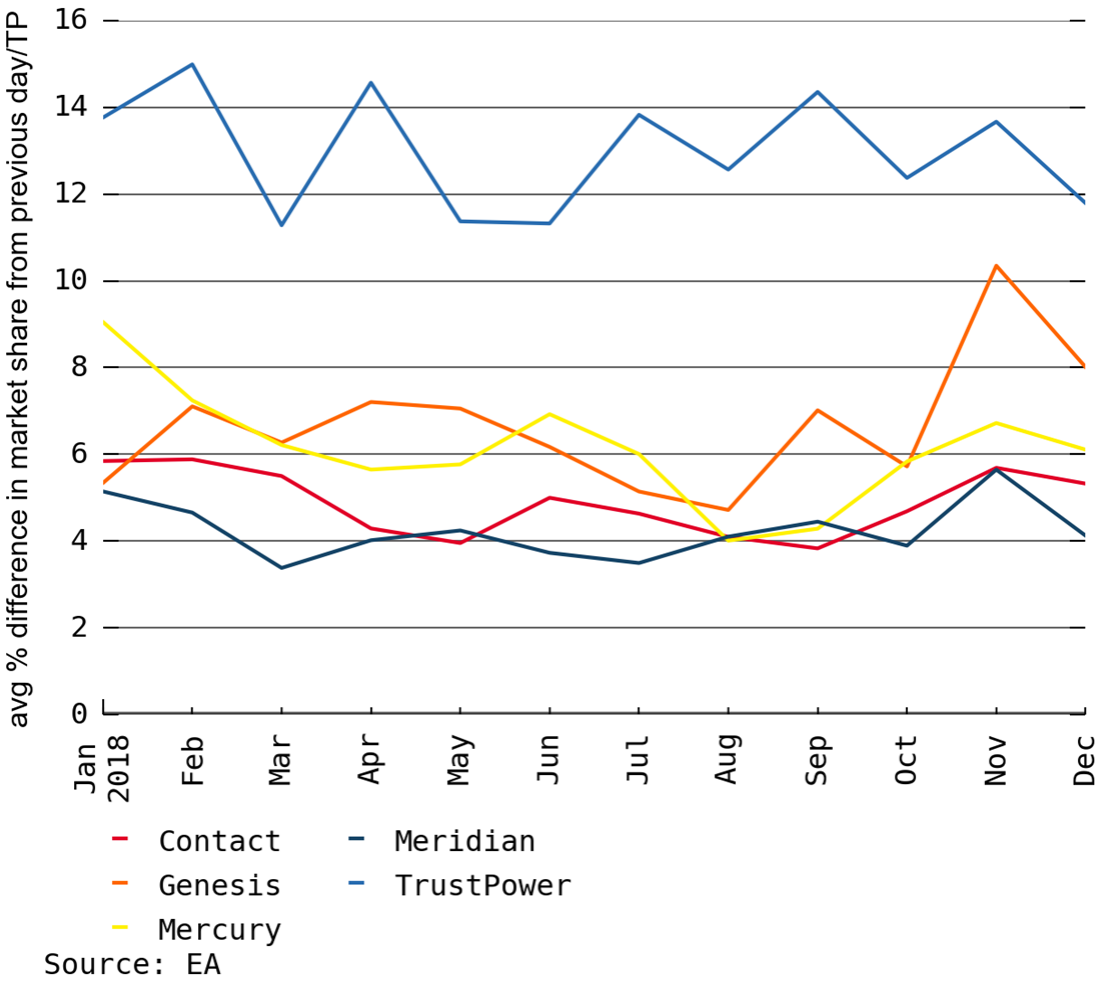
9.11 If tacit collusion were occurring, we would expect market share to remain stable. Figure 16 and Figure 17 below show that market share remained dynamic through the investigation period. This is inconsistent with tacit collusion occurring.

Figure 16: Generation market share 2018



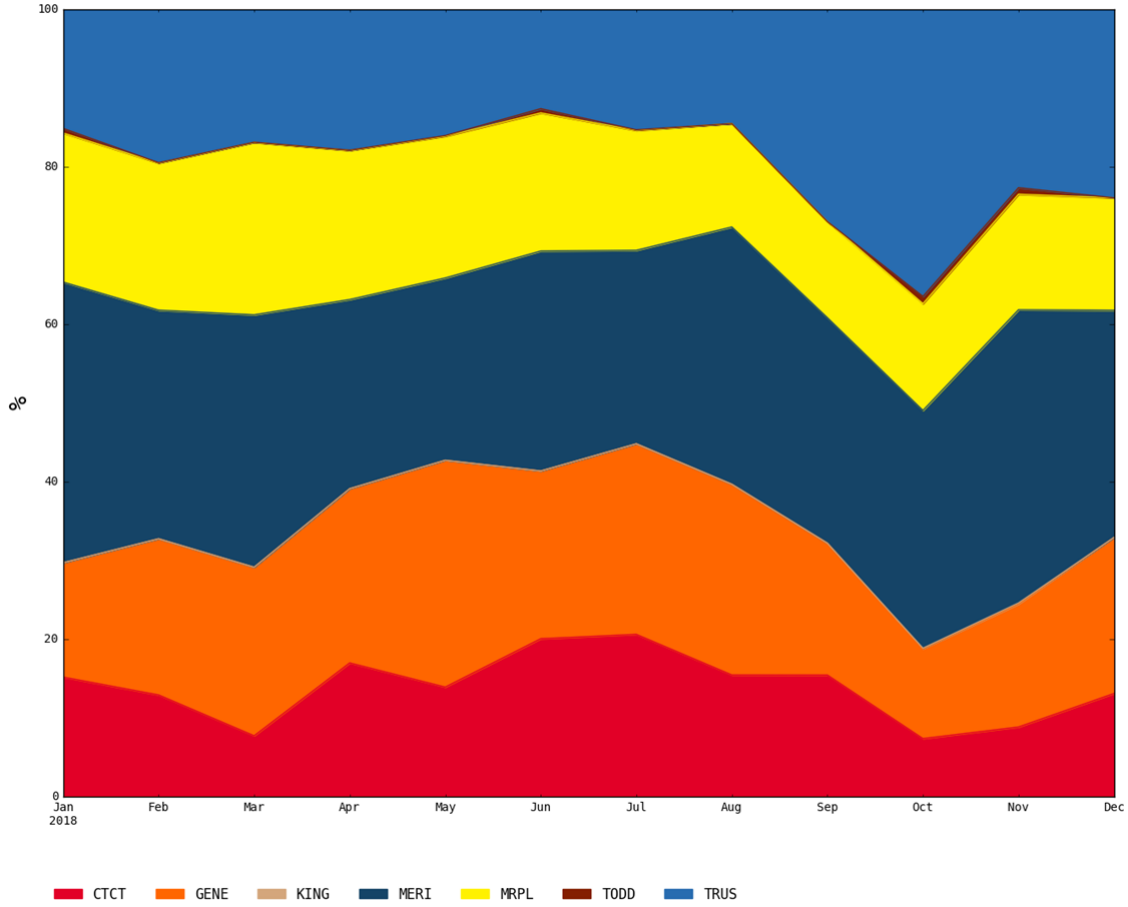
Source: EA

Figure 17: Generation change in market share 2018



9.12 Figure 18 below shows the percentage of trading periods in which each generator was the marginal price setter. Contact and Genesis can be observed setting the price less frequently in October, most likely as a result of their reduced gas supply. The diversity and changing share of price setters shows an unpredictable market. This is inconsistent with tacit collusion occurring.

Figure 18: Marginal price setter 2018



Not all generators profited

9.13 If tacit collusion were occurring, we would expect the alleged collaborators to be making a profit. However, the investigation showed that this did not occur. Based on information received from the four largest generator/retailers, we found that:

(a) Generator A made a profit over the investigation period, but made a loss on 45% of trading periods

(b) Generator B made a profit over the investigation period, but made a loss on the hedge contracts it used to cover its physical position

(c) Generator C made a loss over the investigation period.

9.14 It is inconsistent with tacit collusion occurring for a party to make a loss for any extended period.

Offer activity was competitive

9.15 If tacit collusion were occurring, we would expect lower offer activity in order to maintain the status quo, and we would expect the offer activity that did occur to maintain high prices.

9.16 Figure 19 below shows the number of actions taken by traders for each of the five largest generators. Actions include such things as loading and revising generation offers. Figure 20 below shows the same information as Figure 19, but weighted for the amount of generation affected. Both figures show that traders actively loaded and revised

generation offers throughout the investigation period, suggesting that they were actively competing for market share.

Figure 19: Trader activity index 2018

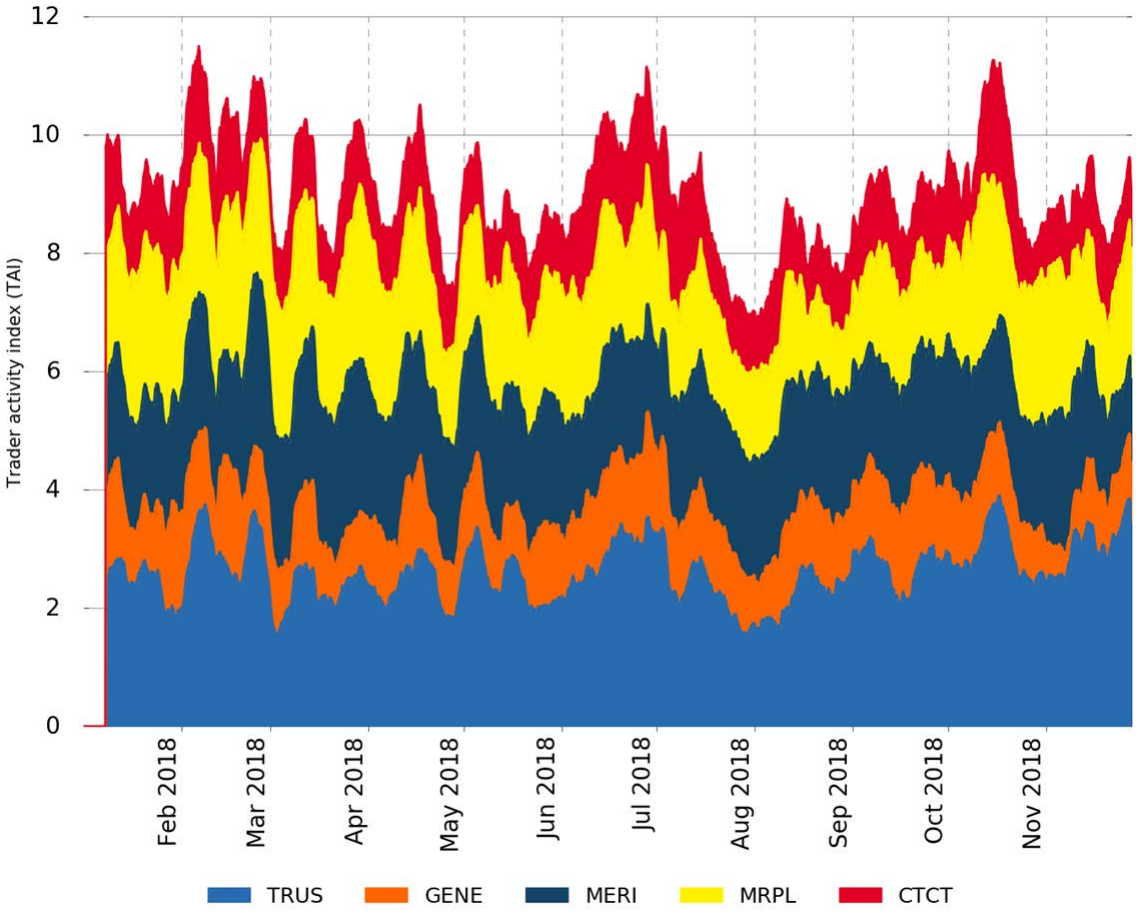
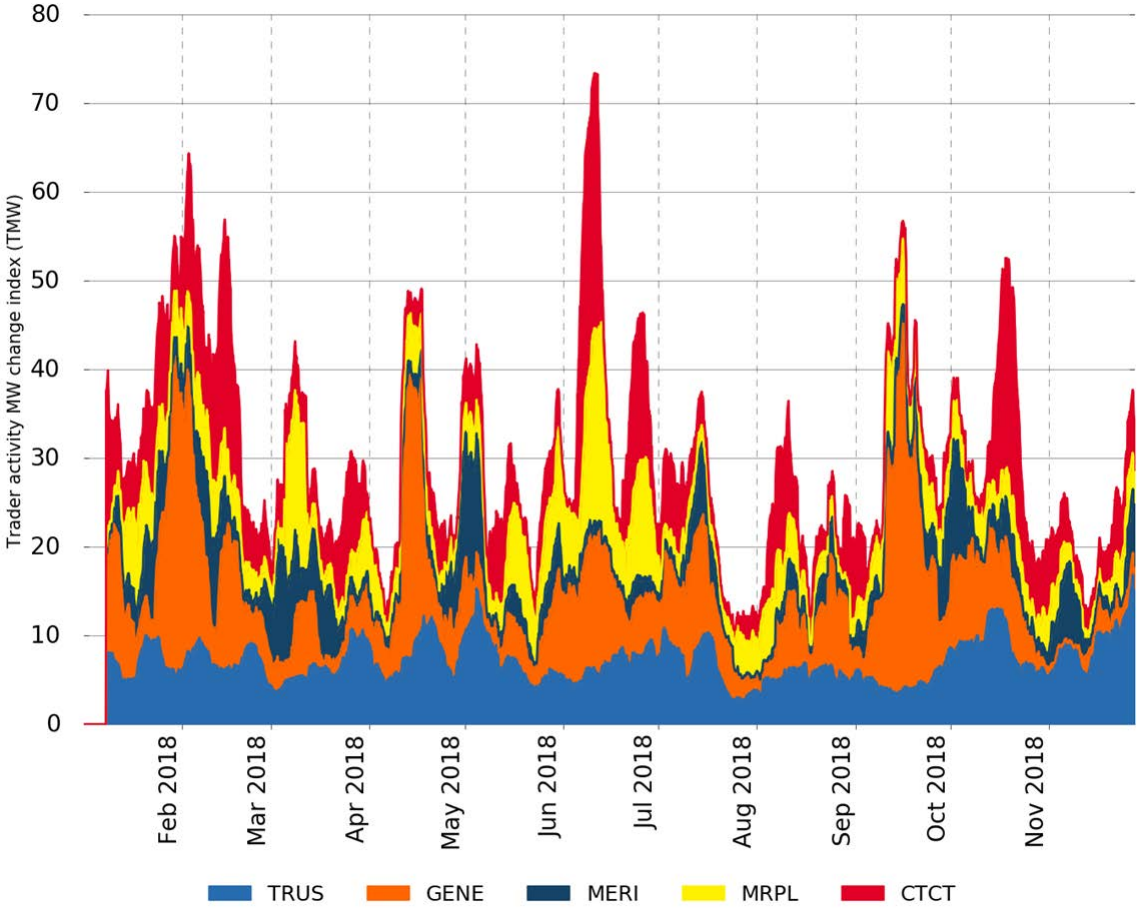


Figure 20: Weighted trader activity index 2018



9.17 Figure 21 and Figure 22 below compare the final spot price (FP) to prices shown in the non-response (NRS) and price-response (PRS) schedule respectively. The coloured lines go from blue (71 trading periods ahead of real time) to red (1 trading period ahead of real time). Both figures show this comparison for the first nine months of 2018, and then for October 2018. The figures show that in October 2018 traders responded to high future spot prices in the PRS and NRS by increasing the volume and/or decreasing the price of offers. This resulted in significantly lower final spot prices than suggested by earlier NRS and PRS estimates. This behaviour is inconsistent with tacit collusion occurring.

Figure 21: Supply curve NRS

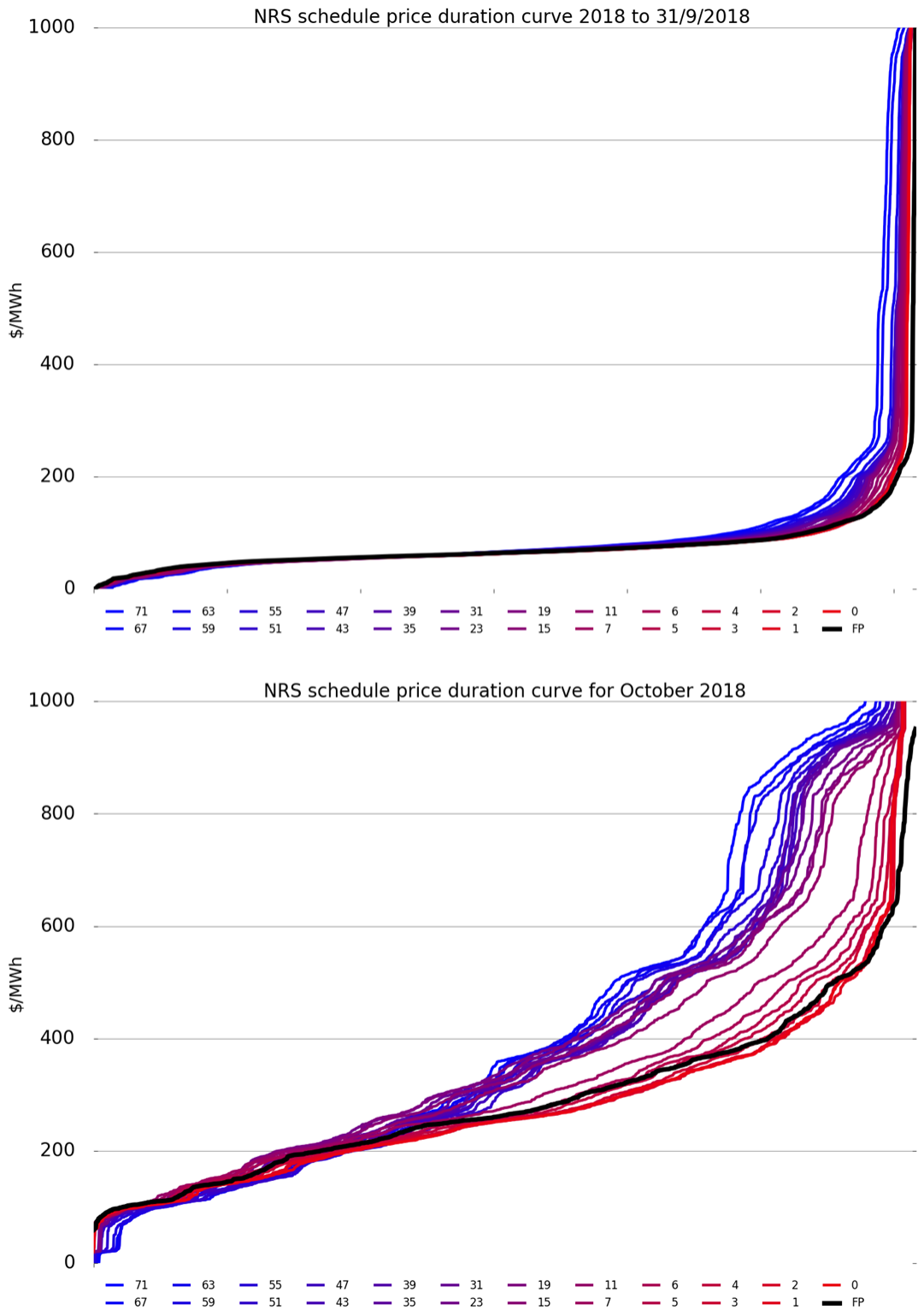
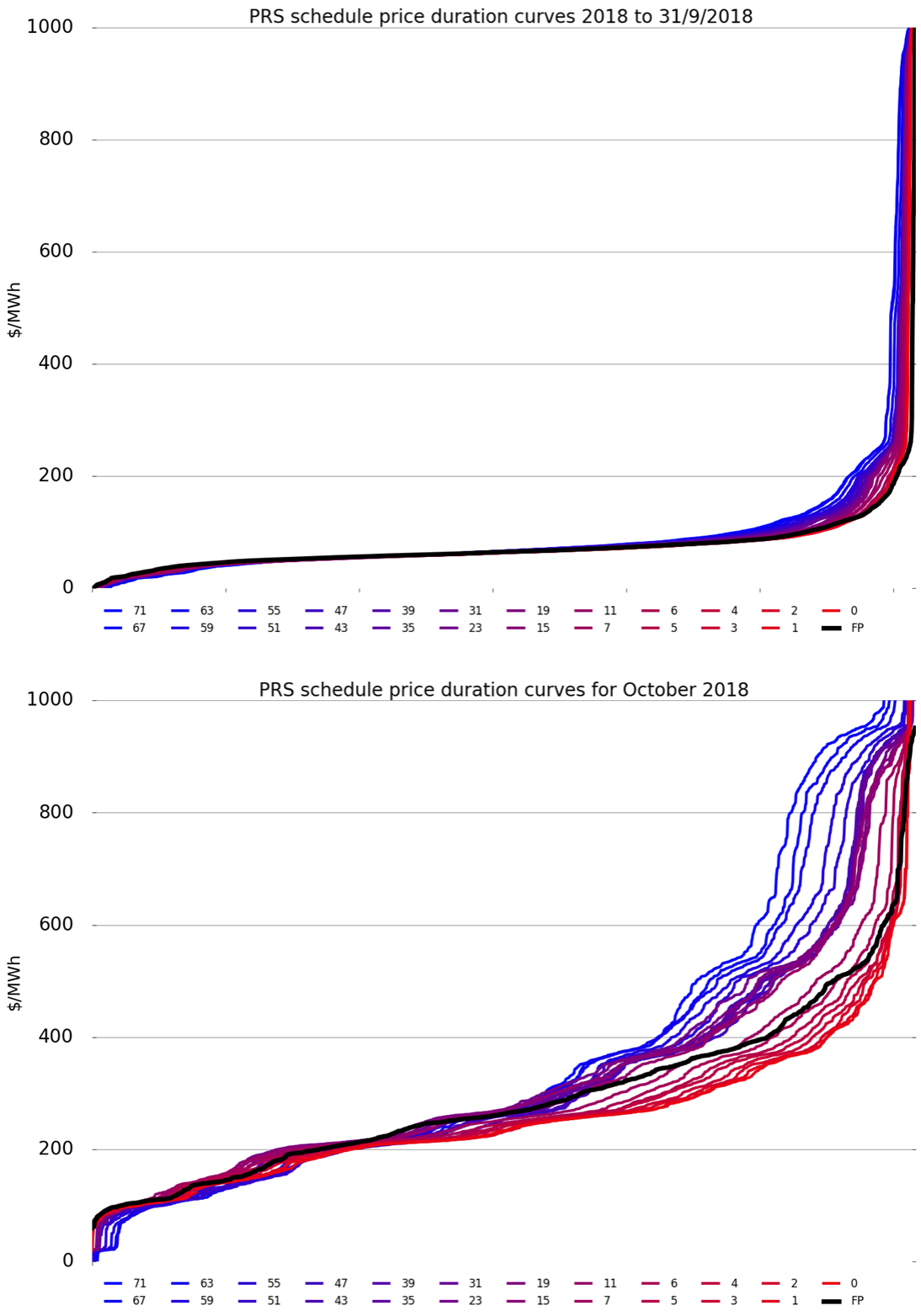


Figure 22: Supply curve PRS



Capacity was expanded

9.18 If tacit collusion were occurring, we would expect competitors to withhold capacity from the market. However, our investigation found that generators with lower efficiency thermal plant made gas available to competitors with higher efficiency thermal plant through commercial agreements.

9.19 In October 2018 when gas was scarce, these agreements increased the effective capacity of the power system and created downward pressure on price. This is inconsistent with tacit collusion occurring.

We found information asymmetry did not threaten confidence in, or integrity of, the wholesale market

9.20 The claimants allege that several participants were required to, but did not, disclose information regarding:

(a) gas supply from Pohokura

(b) generation plant outages

(c) the exercise of a specific hedge contract.

9.21 Our compliance team and the UTS investigation team are liaising regarding alleged non-compliance with disclosure obligations in the Code.

9.22 Information disclosure obligations in the Code are designed to reduce information asymmetry. Accordingly, we considered whether the level of information asymmetry alleged by the claimants threatened confidence in, or the integrity of, the wholesale market. In particular, we considered:

(a) the design of the Code provisions the claimants allege were breached (which were designed to reduce information asymmetry between wholesale market participants)

(b) the extent of information asymmetry in relation to the three allegations made by the claimants

(c) how the long the information asymmetry lasted

(d) whether the information asymmetry caused inefficient outcomes in the wholesale market, such that confidence in, or the integrity of, the wholesale market was threatened.

The Code is designed to reduce—but not eliminate—information asymmetry

9.23 Prices reach efficient levels in markets through a process of arbitrage. This necessarily involves different parties with different information using the market as a mechanism to discover the efficient price—the price that embodies all available information. With arbitrage there is an adjustment process where an asset is moving towards the efficient price. Cases that might concern a regulator are where the price is persistently ‘wrong’ because there is a barrier to all information being embodied in the price. This occurs most commonly in stock markets where an insider may have information that the rest of the market cannot know. The insider is therefore able to take advantage of the erroneous price without shifting the price towards an efficient price through arbitrage.

9.24 In a workably competitive market, information asymmetry exists, but does not persist.

9.25 The Code has several provisions that are designed to reduce information asymmetry between participants. Most relevant to the claimant’s allegations, clause 13.2A of the Code requires participants to publicly disclose information they have about themselves

that they expect would have a material impact on prices in the wholesale market, if it became public. We publish guidelines on those obligations, which state:[15]

> 2.1 The Authority considers that an effective information disclosure regime is a fundamental feature of a well-functioning electricity market. This section describes the Authority's expectations for an effective disclosure regime to provide context for participants in considering their disclosure obligations, and making disclosure decisions.
>
> 2.2 Enhanced information disclosure regulation is generally viewed as a tool for reducing inefficient information asymmetry between informed and uninformed market participants. Information asymmetry in a market can lead to transfers of wealth from uninformed to informed market participants when they trade with each other, potentially leading to inefficient market outcomes.
>
> 2.3 Effective information disclosure regulation can also reduce information costs, assist existing and potential market participants in making informed decisions, and enhance confidence in the integrity of the market by removing opportunities for insider trading and the creation of a false market.
>
> 2.4 In this context, the Authority considers that an effective disclosure regime should:
>
> (a) build confidence in the electricity market
>
> (b) promote efficient monitoring and information provision
>
> (c) reduce inefficient information asymmetry between informed and uninformed market participants and interested parties.

9.26 In designing the information disclosure obligations, we recognised that completely eliminating information asymmetry between participants is not practical or desirable. For example, information disclosure obligations impose costs on disclosing participants that may not outweigh the benefits of disclosure in all circumstances.[16] This is why the guidelines refer to reducing—rather than eliminating—information asymmetry. These considerations explain why the information disclosure obligation in clause 13.2A of the Code provides for exceptions,[17] and recognises the practicality of providing information.[18]

9.27 Further, and as set out in paragraph 6.4, we consider a relevant benchmark to be a *workably competitive* market. This benchmark recognises that a real world market will always have some information asymmetry.

There was information asymmetry in relation to gas supply from Pohokura, but the asymmetry was small

9.28 The claimants allege that Genesis, Contact, and possibly other participants were required to disclose that their normal fuel supplies were disrupted as a result of the

15 https://www.ea.govt.nz/dmsdocument/15138-clause-13-2-disclosure-guidelines.

16 In this context 'cost' refers to such things as the cost of collating and publishing information and data, and also the cost of less tangible things, such as reduced incentive to develop intellectual property if the developer may be forced to publish it, or the commercial disadvantage faced by a participant if it were forced to publish commercially sensitive information.

17 Clause 13.2A(2) of the Code.

18 Participants must disclose information under clause 13.2A of the Code 'as soon as reasonably practicable' (and not immediately).

Pohokura outage, but did not do so. As discussed above, our compliance team and the UTS investigation team are liaising regarding alleged non-compliance with disclosure obligations in the Code.

9.29 In order to determine the level of information asymmetry regarding gas supply at Pohokura during the investigation period, we considered:

(a) what information was available to all participants

(b) what information was available to the best informed participants.

9.30 Information that was available to all participants sets the 'baseline' against which potentially better informed participants can be measured.

9.31 During the investigation it became apparent that some participants were not aware of the full range of publicly available information relevant to gas supply. Accordingly, we set out in this paper where information we used in our investigation may be found.

There was publicly available information regarding Pohokura gas production

9.32 As early as July 2018, Shell (the field operator)[19] signalled a possible Pohokura outage in late 2018 to replace a section of pipeline repaired earlier in 2018:[20]

> Shell will also continue to explore whether to replace the damaged section of the offshore asset [Pohokura]. If that work goes ahead it could be carried out as soon as later this year.

9.33 This suggests that participants should have been alert to the possibility of an extended outage at Pohokura in the second half of 2018. Repairing the pipeline earlier in 2018 took approximately four months.

9.34 Data on gas production and transmission are made available continuously in real time. For example, the Open Access Transmission Information System (OATIS) provides current and historical data on gas transmission.[21] This data can be used to determine production and consumption of gas by various fields and consumers.

9.35 In relation to the Pohokura production outage, it was possible to observe the drop in production on the OATIS website 90 minutes after it occurred. However, the OATIS website does not provide information regarding the likely duration of outages, and we are not aware of any public source of this information beyond the ad hoc press releases provided by the field operator.

9.36 It is generally known that most, if not all, large gas supply agreements contain confidentiality provisions. As an example, Genesis stated in a submission to the Wholesale Advisory Group's wholesale market information project that each of its gas supply contracts is subject to confidentiality provisions.[22]

---

19 Shell was the operator of Pohokura for most of 2018, including the investigation period. The operator of a field is the person responsible for the day-to-day management of activities under the petroleum mining permit.

20 *Energy News* 23 July 2018: https://www.energynews.co.nz/news-story/oil/38488/shell-restarts-offshore-pohokura-production.

21 https://www.oatis.co.nz/Ngc.Oatis.UI.Web.Internet/Common/OatisLogin.aspx.

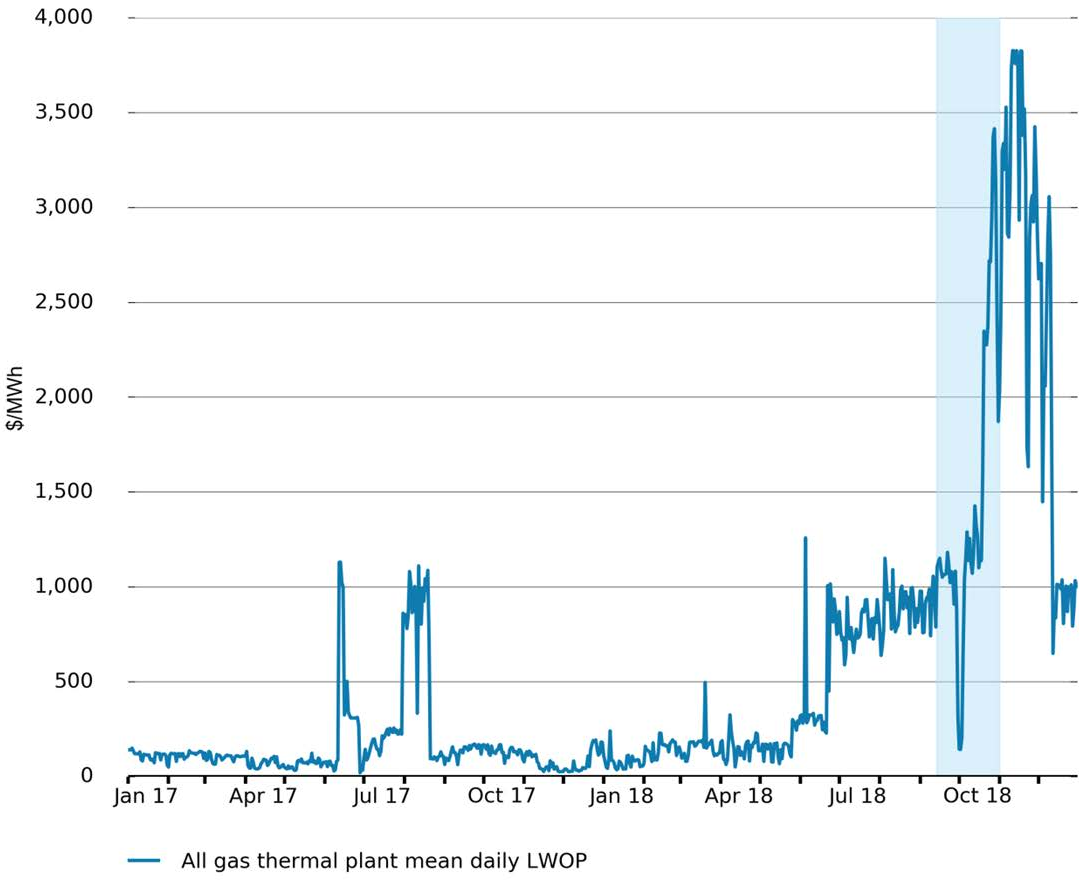
22 https://www.ea.govt.nz/dmsdocument/13660-wholesale-market-information-project-recommendations-paper.

9.37 Offer data for thermal plant was also publically available. These are hosted on the EMI website.[23] Figure 23 below shows the daily average load weighted offer price for gas fired thermal plant over 2017 and 2018. The blue band is the investigation period. The start of the blue band (14 September 2018) is the date the relevant Pohokura outage started. Figure 23 shows that from about the middle of June 2018, offer prices for gas fired plant increased significantly. The situation in the winter and early spring of 2018 can be compared on the chart with the winter of 2017 where the offers were as high, but for a far shorter period despite the hydro conditions causing concern.

9.38 The same data can be used to show the quantity of offers above $500/MWh for gas fired plant. Figure 24 shows the totally daily offer volume that was priced above $500/MWh for gas fired plant. The blue band is the investigation period. The start of the blue band (14 September 2018) is the date the relevant Pohokura outage started. Again Figure 24 shows that gas fired generation was becoming costly to an extent not seen recently.

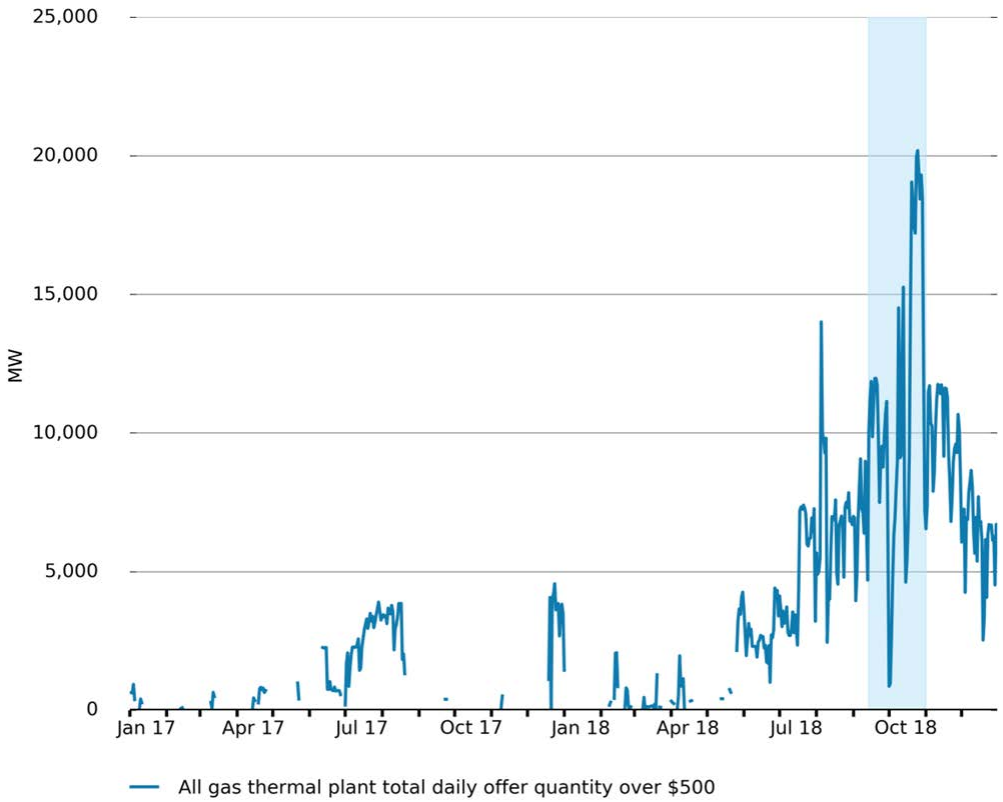
9.39 The data in Figure 23 and Figure 24 formed part of the data that was publically available to analysts in the electricity market. While not definitive in the sense that it does not paint a complete picture of the situation, combined with other publically available information, it does point to a heightened level of supply side risk.

Figure 23: Daily average load weighted offer price for gas fired plant 2017 and 2018



[23] We maintain the Electricity Market Information website: https://emi.ea.govt.nz/.

Figure 24: Offers over $500/MWh for gas fired plant 2017 and 2018



Initially there was a small information asymmetry

9.40 At the point when Pohokura's output fell on 14 September 2018, the three participants that purchase gas directly from the gas field owners received notices that their access to gas would be reduced. The notices indicated the duration of the reduction would be three days for two of the participants and 'a number of days' for the third participant.

9.41 In addition to the formal notifications, in one case a participant was told that the outage 'will take some time to fix', and in another case a participant was told that the field operator expected the issues to 'run for a number of days'.

9.42 In contrast, the publically available information was that Pohokura's output had halved. This occurred in the context of:

(a) the well-signalled possibility of a major shut down for a pipeline replacement

(b) high gas fired thermal offers in the spot market

(c) public knowledge that gas supply agreements have confidentiality clauses.

9.43 We are not aware of any further written notices between the end of the period covered by the first notices (that is, three days and 'a number of days' after 14 September 2018) and 20 September 2018 when one participant (Genesis) was alerted to the possibility that the outage would last for a significant amount of time.

By 20 September 2018 information asymmetry had increased but was still small

9.44 On 20 September 2018 Genesis was informed of a range of possible scenarios for addressing the valve issue, the longest of which would involve concurrently replacing the

section of damaged pipeline, as signalled earlier in the year. Genesis had forecast availability information from OMV (an owner of Pohokura, and a supplier of gas to Genesis) that showed the pipeline replacement (and corresponding outage) was forecast to last 53 days.

9.45 On 20 September 2018 the publically available information was that Pohokura's output had halved and remained at that level for six days. This occurred in the context of:

(a) the well-signalled possibility of a major shut down for a pipeline replacement

(b) high gas fired thermal offers in the spot market

(c) public knowledge that gas supply agreements have confidentiality clauses.

By 28 September 2018 it was clear to all participants there was a major problem

9.46 On 28 September 2018 Shell made its first public statement, which strongly indicated there was a major issue with Pohokura:[24]

> We have full hydrocarbon containment with the wells shut-in securely and workstreams have been initiated to support further testing and potential change-out of this valve.

9.47 Statements by Shell were also reported in the media:[25]

> We cannot confirm when production will restart until the valve has been fully assessed.

9.48 From this point onwards it was clear there was a major problem, the duration of which was open ended. The only unanswered question was how long the outage would last.

By 8 October 2018 the outage duration was becoming clear

9.49 Genesis was informed on 8 October 2018 that Pohokura was likely to be out until the end of November 2018.

9.50 On 8 October 2018 the publically available information included that Pohokura's output had halved and remained at that level for 24 days, and there was an indefinite shut down of Pohokura due to a valve issue.

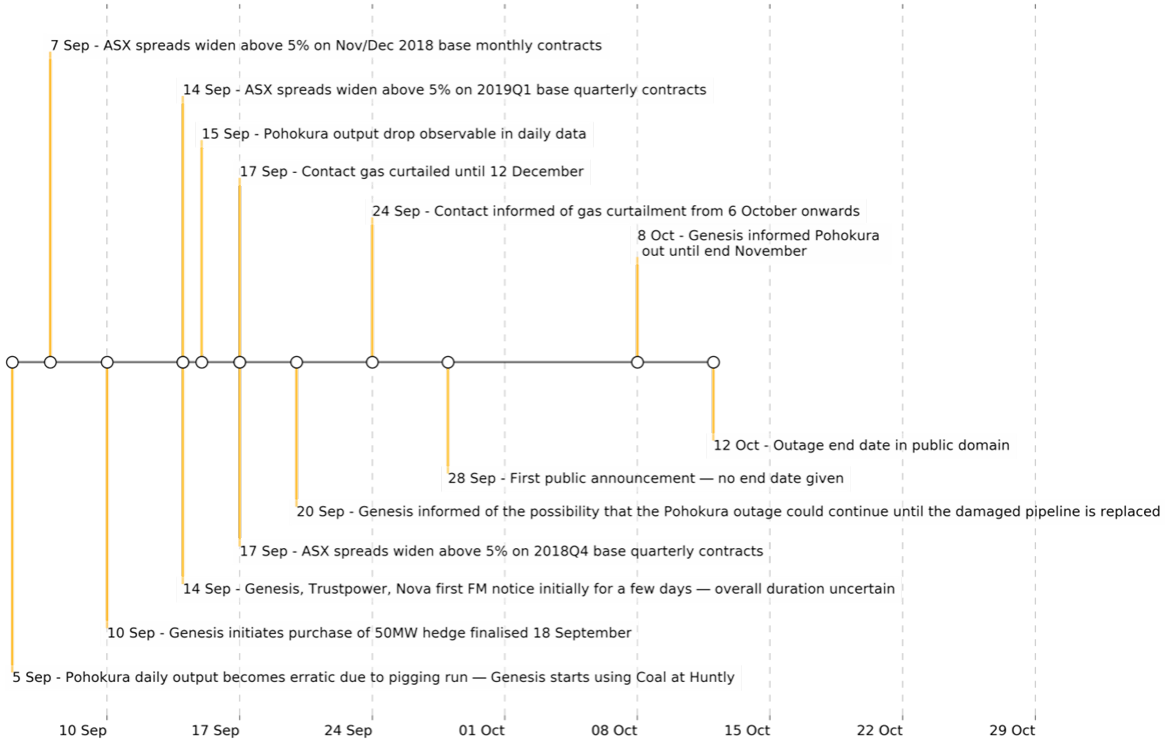
9.51 Shell publically announced on 12 October 2018 that Pohokura would be out until the end of November 2018.

---

24 Emailed statement from Shell.

25 *Scoop* 28 October: http://www.scoop.co.nz/stories/BU1809/S00823/pohokura-production-cut-for-second-time-this-year.htm.

Figure 25: Truncated timeline of material events



Over the investigation period there was a window in which some participants had better information than the rest of the market

9.52 We consider that a well informed participant—one not directly involved in the gas market—would have been able to deduce that there were serious problems with gas supply from 15 September 2018 onwards. We also consider that from this date—as the output from Pohokura failed to recover—a well informed participant would become increasingly aware that spot price risk was increasing.

9.53 The difference between what the best informed participants knew, and what a well informed participant could have known from publicly available information, was:

(a) non-material for significant periods

(b) small from 20 to 28 September 2018.

9.54 Further, even the best informed parties faced significant uncertainty about the duration of the gas outage.

9.55 The investigation has highlighted that:

(a) many participants are not making use of the range of publicly available information regarding gas supply and other factors affecting the wholesale market

(b) the perception of information asymmetry was much larger than the actual asymmetry

(c) publicly available information regarding gas supply and other factors affecting the wholesale market is difficult to find and interpret

(d) there may be a perception that it is desirable or practical to eliminate information asymmetry

(e) the information asymmetry would have been greater, but for the voluntary disclosure of information by entities not in the electricity industry.

9.56 We note the Gas Industry Company is currently reviewing the availability of gas information and is expecting to release a consultation paper in early 2019.[26]

9.57 We consider that publishing our decision will go some way to:

(a) increasing awareness of publicly available information

(b) addressing the perception that some participants had access to significantly better information than others

(c) addressing the perception that it is necessary or desirable to eliminate information asymmetry in all circumstances.

9.58 We will consider whether any of these issues warrant further attention once our compliance investigations are concluded.

9.59 In the next section we consider whether there is evidence that the information asymmetries identified above could have caused inefficient outcomes in the wholesale market.

We looked for evidence of the information asymmetry affecting market outcomes

9.60 Of the four largest generator/retailers only Genesis had a significant position in relevant hedge contracts (contracts for Q4 2018, October 2018, and November 2018). It started to build this position during 2016.

9.61 Genesis built its position in the hedge market to cover a long-planned outage of its e3p plant. This outage was notified to the market on 11 January 2016.[27] The outage was planned for, and occurred, from 26 October 2018 to 11 December 2018. Genesis built its position by purchasing quarterly contracts in 2016 and 2017, and monthly contracts once they began trading in early 2018. Genesis had approximately 150MW of hedge cover for its e3p outage at the start of the investigation period.

9.62 Genesis then increased its holding of October 2018 monthly contracts, and options for Q4 2018 contracts, in a relatively short time during the 10 days before the first public announcement by Shell on 28 September 2018.

9.63 We asked Genesis for an explanation for its rapid accumulation of October 2018 monthly contracts. It stated that, although initially satisfied with its October 2018 hedge position to cover the e3p outage, it changed its views in early September 2018 because of:

(a) gas supply shortage information from public sources

(b) lower than average hydro storage levels—specifically Lake Tekapo had declined to less than 40GWh of storage

(c) lower than average rain forecast as indicated by subscription services.

9.64 Together these factors meant that Genesis was faced with running its Rankine units on coal to cover the e3p outage rather than using Tekapo storage. At the time the ASX price was under the equivalent coal price, so Genesis purchased October monthly contracts because they were the lowest cost option.

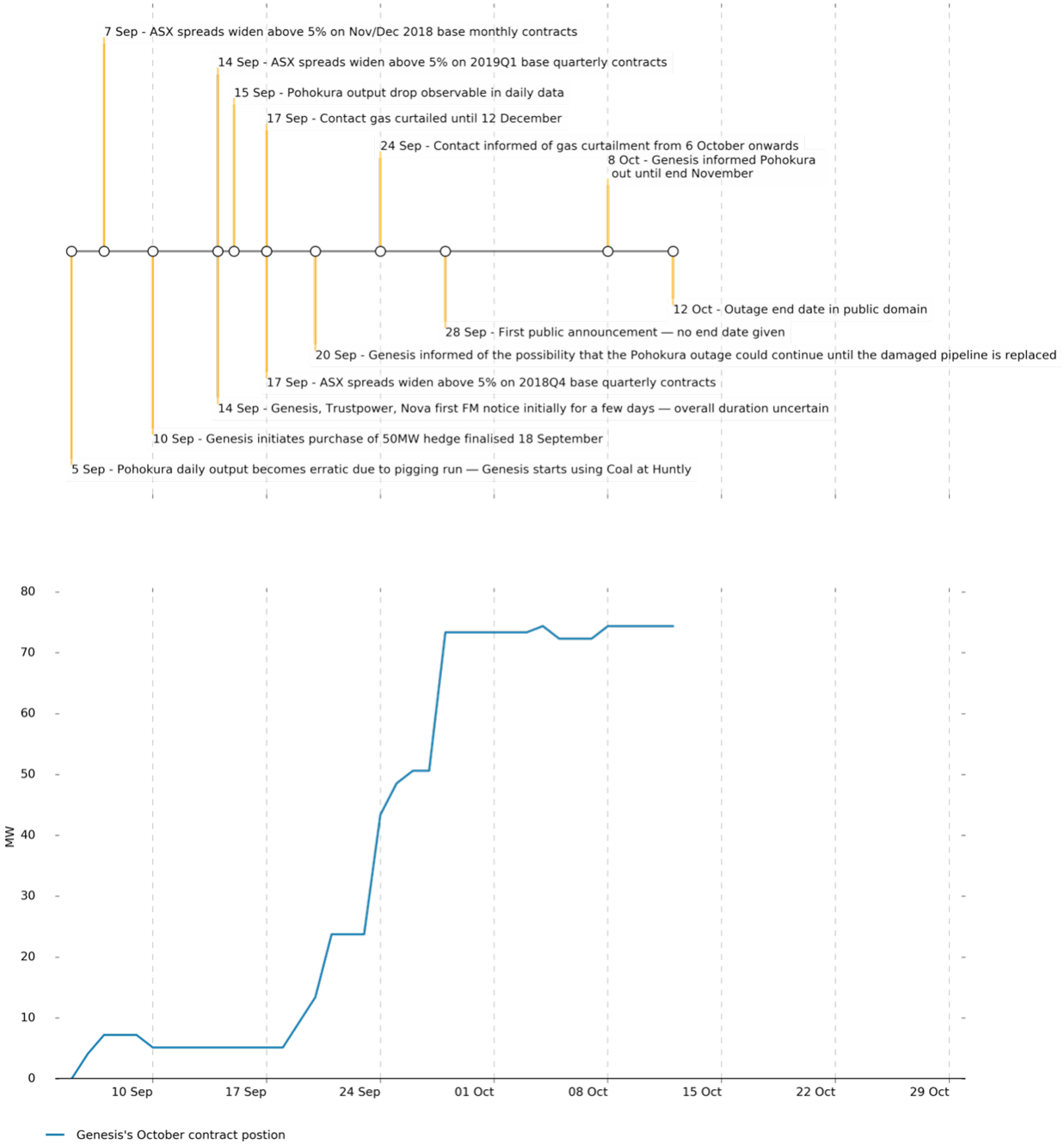
---

26 https://gasindustry.co.nz/work-programmes/gas-sector-information-disclosure/overview/.

27 The outage was publicly notified on the POCP website. POCP is discussed in more detail below.

9.65 Figure 26 below sets out Genesis' purchase of October 2018 contracts and relevant market events.

Figure 26: Genesis net position for October 2018 monthly contracts and market events



9.66 Genesis' final hedge position in all contract types over the period of its outage was approximately 190MW in October and approximately 220MW in November. In contrast, e3p generated about 375MW over a comparable period in 2017. This suggests that Genesis had less hedge cover than was required to cover the outage. In addition Genesis has provided information to show that overall in September and October 2018 it made a loss from its hedge contracts used to cover its physical position.

9.67 We also noted the information Genesis provided about information barriers it has in place between its ASX derivatives trading team and its fuel procurement team. Genesis provided evidence that its trading team did not have non-public information about the Pohokura outage. Accordingly, Genesis as an entity may have had an information advantage at times during the investigation period, but it has internal arrangements aimed at preventing this being acted upon.

Conclusion on gas outage information asymmetry

9.68 The investigation found that there was information asymmetry with regard to gas outage information, but it was small and often non-material, and the best available information was still uncertain. The investigation also found that the perception of information asymmetry was larger than the actual asymmetry. We think this was largely caused by difficulty in accessing information regarding gas outages and other indicators of the gas supply situation.

9.69 The investigation found a single example of where the information asymmetry may have caused inefficient market outcomes. This is Genesis' rapid purchase of hedge contracts in the 10 days prior to Shell's public announcement on 28 September.

9.70 Genesis significantly altered its position in the hedge market at a time when it had better information than was publicly available. However, it is important to note that the information that Genesis had access to, whilst the best available, was still uncertain and not significantly better than that available publicly. Importantly, Genesis had a legitimate commercial reason for purchasing October contracts.

9.71 In particular, publicly available information was that:

(a) Genesis had a well signalled outage of e3p that it needed to cover (available on the POCP website)

(b) hydro storage was below average (available on the EMI website)

(c) there was a range of information suggesting significant issues with gas supply (available from several sources, as discussed in this section)

(d) there was a range information suggesting that spot price risk was significant (available from several sources, as discussed in this paper).

9.72 Given this set of information, an informed participant may well have purchased October monthly contracts. That is, based on the information available to us, it is not clear that Genesis would have acted any differently if it only had access to publicly available information (i.e., if there were no information asymmetry). Therefore we do not consider the information asymmetry lead to inefficient outcomes in the wholesale market, and we do not consider the asymmetry threatened the integrity of, or confidence in, the wholesale market.

9.73 Our compliance team and the UTS investigation team are liaising regarding alleged non-compliance with information disclosure obligations in the Code. We have referred allegations relating to Australian securities law to ASIC, and will provide further assistance as necessary.

We found information relating to plant outage information was disclosed in a timely manner

9.74 The claimants set out specific instances where they allege Genesis and Contact failed to disclose generation plant outages in accordance with the Code. Our compliance team

and the UTS investigation team are liaising regarding alleged non-compliance with disclosure obligations in the Code.

9.75 We have undertaken analysis of plant outage disclosures in order to determine whether there is evidence of information asymmetry causing inefficient outcomes.

9.76 In relation to plant outages, information asymmetry exists during the time between when the plant operator/owner:

(a) knows of the outage

(b) publicly discloses the outage.

9.77 We consider this information asymmetry could lead to inefficient outcomes in the wholesale market if it allows participants who know of the outage to trade on the basis of the outage before it is publicly disclosed. To test whether this is occurring on a widespread basis we looked at the timing of outages on the POCP website.[28] POCP is used by participants to notify outages. We assessed whether outages were publicly disclosed immediately before, during, or immediately after, the ASX market making window. The ASX market making window, from 3.30PM to 4.00PM on trading days, is when most ASX trading is conducted.

9.78 Figure 27 and Figure 28 below show the times at which outage information is disclosed on the POCP website. Trading period 32 (highlighted in the figures) is the market making window on the ASX.

9.79 The analysis below shows no correlation between the ASX market making window and the timing of outage disclosures. This shows that plant owner/operators are not using plant outage information to trade on the ASX in any systemic way.

9.80 Accordingly, we do not consider that information asymmetry relating to plant outage information caused inefficient outcomes in the wholesale market, such that confidence in, or the integrity of, the wholesale market was threatened. In fact the lack of correlation between the trading window and outage announcements should increase participants' confidence that they are fully informed about outages and that no other participants are taking advantage of outage information.

[28] https://pocp.redspider.co.nz/search/.

Figure 27: Weighted disclosures by trading period

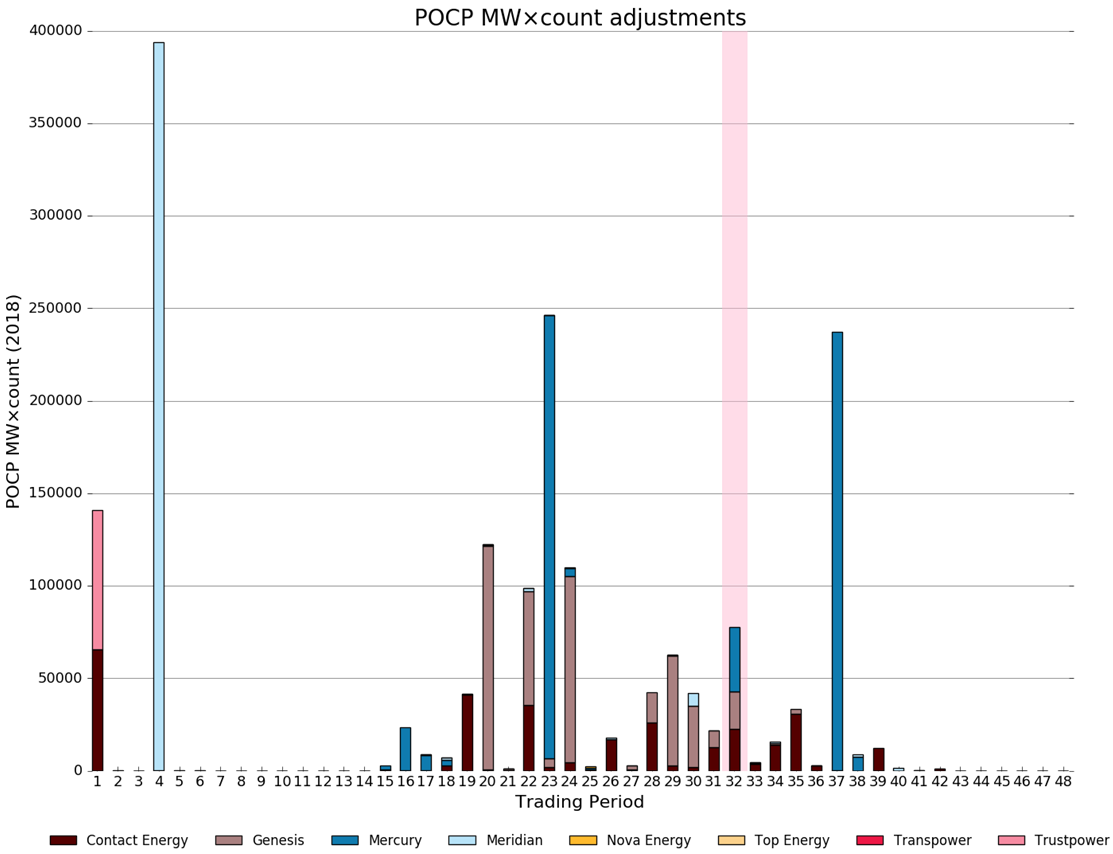
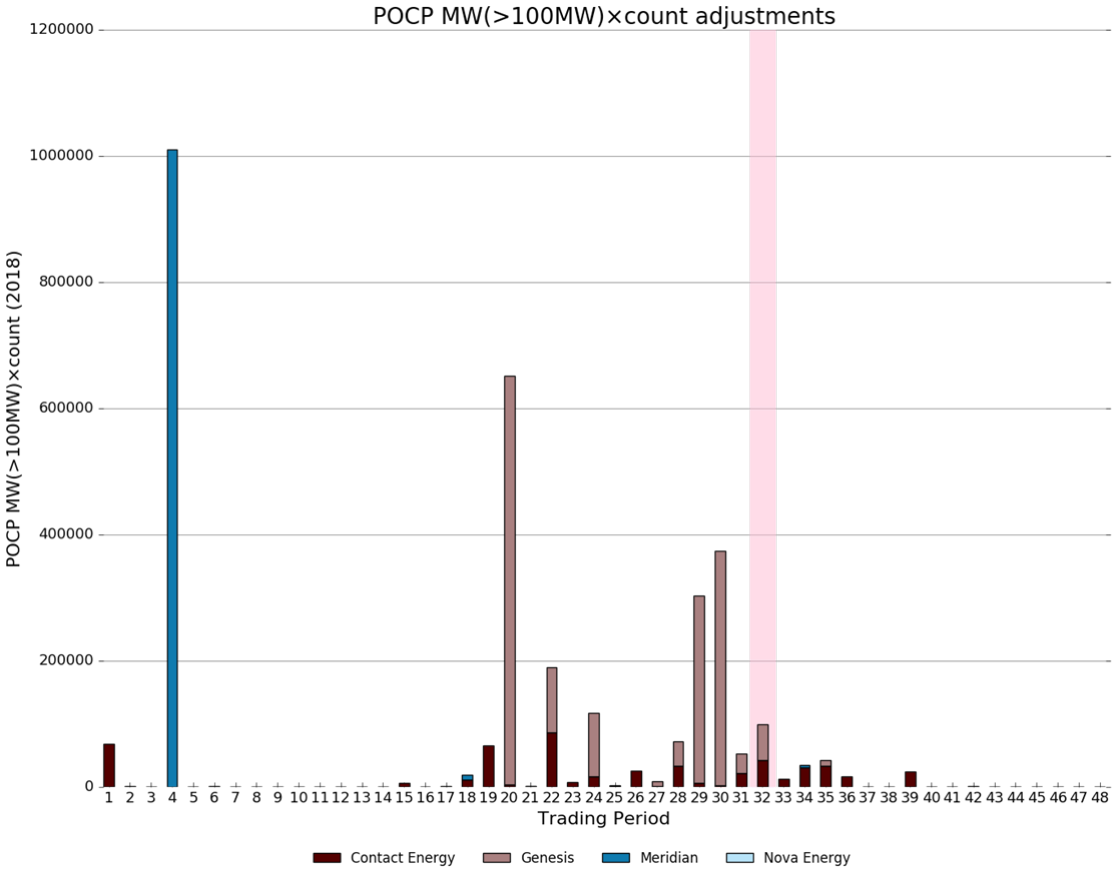


Figure 28: Weighted disclosures greater than 100MW by trading period



The Meridian/Genesis swaption was exercised

9.81 The claimants allege that a specific hedge contract between Meridian and Genesis (the 'swaption', the existence of which is well known) was exercised during the investigation period, and that this should have been disclosed under the Code. As discussed above, our compliance team and the UTS investigation team are liaising regarding alleged non-compliance with disclosure obligations in the Code.

9.82 Meridian has told us that the swaption was exercised during the investigation period, and it did not disclose the relevant information because:

(a) it considers the information was not required to be disclosed. This is because it was not expected to have a material impact on prices in the wholesale market

(b) even if it was expected to have a material impact on prices, the swaption contains confidentiality clauses that prevent Meridian from disclosing such information.

9.83 We consider that it would be apparent to a reasonably informed participant that the swaption was exercised during the investigation period. The operation of Genesis' Rankine units in the context of low hydro storage, public announcements from Genesis about coal imports, and low forecast rainfall are indications the swaption was being exercised.

9.84 Meridian discloses when the swaption is exercised in its monthly operating reports.[29] The October 2018 report notes that the swaption was exercised without providing further details.

9.85 Accordingly, the gap between what Meridian and Genesis knew, and what a reasonably informed participant should have known, is limited. We do not consider that information asymmetry relating to the exercise of the Meridian/Genesis swaption caused inefficient outcomes in the wholesale market, such that confidence in, or the integrity of, the wholesale market was threatened.

Conclusion on information asymmetry

9.86 In this section we:

(a) noted that our compliance team and the UTS investigation team are liaising regarding alleged non-compliance with disclosure obligations in the Code

(b) noted the Code provisions that are the subject of the claimants' allegations are designed to reduce information asymmetry in the wholesale market, and that it is not always practical or desirable to eliminate all information asymmetry.

(c) considered each of the allegations in the claim, and whether there was evidence of information asymmetry threatening confidence in, and integrity of, the wholesale market.

9.87 Our investigation of each of the three allegations in the claim found there was no information asymmetry that threatened confidence in, and integrity of the wholesale market. However, we are concerned that participants are not using all available sources of information relevant to the wholesale market, and in particular gas supply. We are also concerned that some relevant information is difficult to find and interpret. We will consider whether these issues warrant further attention once our compliance investigations have concluded.

[29] https://www.meridianenergy.co.nz/investors/reports-and-presentations/operating-reports.

We found that the hedge market performed as expected

9.88 The claimants allege the ASX market makers 'disregarded' their market making agreements, causing the market to fail because independent electricity purchasers were unable to effectively manage their exposure to spot prices.

The market makers did not breach their market making agreements

9.89 Market making on the ASX is supported by way of voluntary agreements between the ASX and each market maker. Those agreements are private. However, publicly available information sets out the requirement that market makers provide liquidity for a wide range of ASX contracts, and generally provide bids and offers with no more than a 5% spread.[30]

9.90 During the investigation period, spreads for ASX contracts expiring within 12 months widened significantly above 5%, although they remained available for trade. ASX contracts expiring further than 12 months in advance continued to have spreads at or below 5%.[31]

9.91 It is generally understood the market making agreements contain a 'portfolio stress' clause, under which each market maker is able to withdraw from its market making obligations when it reaches financial risk thresholds.

9.92 It is a well-known feature of the ASX market that market makers will rely on 'portfolio stress', and trading conditions will deteriorate, during times of stress in the wider wholesale market. For example, this is what occurred during 2017, as reported in our *2017 winter review*.[32]

9.93 The ASX has confirmed that the portfolio stress clauses were relied on during the investigation period, and none of the market makers breached their market making agreements.

We have not found evidence that the hedge market failed to provide effective hedging

9.94 A primary reason for the existence of the hedge market is to allow parties exposed to the spot market (as either buyers or sellers) to manage and control the risk of volatile prices in the spot market. The claimants allege that conditions in the hedge market did not allow parties exposed to the spot market to effectively manage their risk.

9.95 In general, we do not have a position on how market participants should manage their risk, or on what an appropriate level of risk is. We are concerned with ensuring participants have the tools available to effectively and efficiently manage their risk, as they see fit. Figure 29 below shows the price trends of three monthly hedge contracts that cover the investigation period.

9.96 Purchasing hedge contracts after prices become volatile during a national gas shortage is inevitably a costly risk management strategy. It is also relevant to note that, even though bid ask spreads were wide during the investigation period, there was still significant volume of contracts traded, indicating that participants were still willing to transact.

---

30 https://www.asx.com.au/products/market-maker-arrangements.htm.

31 Conditions in the hedge market are discussed in more detail in section 8 above.

32 https://www.ea.govt.nz/monitoring/enquiries-reviews-and-investigations/2017/winter-2017-review/.

Figure 29: Settlement price trends Otahuhu

9.97 As part of the investigation, we interviewed nine MEUG members about their experiences managing spot price risk over the investigation period. Most of the MEUG members we interviewed were well hedged leading into October, and most felt confident that they could hedge in the future (although they were worried about hedge prices in the short term).

The events in spring 2018 reinforce the need for further hedge market development

9.98 We recognise that a liquid hedge market is vital to achieving our statutory objective, particularly to promote competition for the long-term benefit of consumers. For many years we have chosen to facilitate voluntary market making arrangements for ASX products, rather than intervene more extensively. This approach has allowed the market to evolve over time and produced significant benefits, but also has well known limitations, which are becoming more apparent over time. For example, in its review of winter 2017, our market performance team found the durability of market making arrangements should be considered to ensure outcomes of our approach are still consistent with our policy intent.[33]

9.99 We regularly consider whether the voluntary arrangements could be improved, or are the most appropriate way to ensure liquidity. Our indicative 2019/20 work programme includes a project to enhance the hedge market.[34] The project will consider a number of potential improvements, including whether market making can be made more robust. However, before we intervene in the market we must be confident the benefits of any intervention outweigh the costs which, based on overseas experience, may be considerable.

33 https://www.ea.govt.nz/monitoring/enquiries-reviews-and-investigations/2017/winter-2017-review/.

34 https://www.ea.govt.nz/dmsdocument/24346-201920-consultation-paper-levy-funded-appropriations-and-indicative-work-programme.

High spot prices are a normal feature of the market and should be expected

9.100 The claimants allege that spot prices in spring 2018 were so high as to constitute a UTS, regardless of whether they accurately reflected supply and demand conditions. In particular, the claimants state on page 10 of their claim that '[t]he prospect of one of the [Authority's] stress test scenarios being breached itself also constitutes a UTS'.

Spot prices over the relevant period were unusually high

9.101 The average spot price in October 2018 was $292.91/MWh. The average spot price in the last quarter of 2018 was $192.82/MWh.

9.102 These prices are comparable to those in the 'energy shortage' scenario that is used as part of the 'stress test' regime in the Code.

The stress test helps participants understand the risk of high prices

9.103 The Code requires participants trading on the wholesale market to undertake quarterly stress tests. The test requires participants to model their financial resilience under two scenarios:

(a) a 'capacity shortage' (in which spot prices are $10,000/MWh for eight hours in a single day)

(b) an 'energy shortage' (in which spot prices average $250/MWh for three months).

9.104 Our website states:[35]

> Participants should note that these scenarios have been prepared solely for the purposes of the stress testing regime. The scenarios are completely hypothetical - spot prices could be higher or lower than those set out in these tests - even if events similar to the stress tests occurred.

9.105 The energy shortage scenario used in the stress test is not a worst case scenario, for example, the hypothetical energy shortage in the scenario is not so severe that an official conservation campaign has been called. In a severe energy shortage, we would expect spot prices to rise even higher.

9.106 The stress test regime was introduced in 2011 and is part of several measures designed to help the industry efficiently manage security of supply. The objectives of the stress test regime are to:[36]

(a) reduce the scope for opportunistic lobbying by adversely affected participants to socialise the cost of poor risk management decisions

(b) enhance incentives for participants to appropriately manage their spot price exposure

(c) enhance access to information on spot price exposure for participants and for the Authority.

9.107 We note the stress test regime is only one of a number of strategies that participants can use to assess their level of risk. The stress tests in the Code are the tests required to be reported to the Stress Test Registrar. This does not prevent participants using other stress tests and alternative stress levels as part of their internal risk management.

---

35 https://ea.govt.nz/operations/wholesale/spot-pricing/stress-tests/.

36 https://www.ea.govt.nz/dmsdocument/21365-review-of-the-stress-test-regime-consultation-paper.

9.108 We consider that administratively reducing spot prices with no justification other than they are 'high' would undermine confidence in, and the integrity of, the wholesale market itself. High spot prices provide a range of incentives including, for example:

(a) to reduce demand. This helps to ensure demand does not exceed supply in the short term

(b) to further invest in generation capacity. This helps to ensure that supply keeps up with demand in the long term.

9.109 Unnecessarily administratively capping high spot prices could decrease security of supply and undermine confidence in, and integrity of, the wholesale market.

There were significant gas shortages

9.110 The claimants say that a UTS exists because of a confluence of factors, including 'potential *force majeure* events impacting gas supply' (page 4 of the claim, Appendix A).

9.111 It is now well known that a production disruption affected the Pohokura gas field from 14 September 2018 to 11 December 2018. This is discussed in section 8 above. We have confirmed that, as a result of that production disruption, several thermal generators had their gas supply curtailed during the investigation period, including by way of receiving *force majeure* notices from their gas suppliers. Affected generators responded in different ways, including by:

(a) running plant on coal instead of gas

(b) making gas available to more efficient generators through commercial arrangements

(c) withdrawing generation plant from the market

(d) increasing generation offer prices to reflect the increased price of gas.

9.112 We use a range of measures to ensure that security of supply is managed efficiently. These include, for example:

(a) official conservation campaigns

(b) a customer compensation scheme

(c) rolling outages.

9.113 More information regarding these measures is on our website.[37] The threat of the measures being implemented appears to achieve the goal of incentivising participants to avoid supply shortages, as demonstrated in winter 2017 and spring 2018. We note that none of the measures were utilised during the investigation period. We do not consider that the gas supply outage at Pohokura threatened confidence in, or integrity of, the wholesale market.

Conclusion on factors in the claim

9.114 In the paragraphs above we considered each of the factors the claimants put forward for a UTS existing. We found the factors either did not occur (either partially or wholly), or were a function of the market operating normally.

9.115 We found no evidence of tacit collusion occurring during the investigation period. Our analysis showed tacit collusion is inconsistent with the market conditions observed over

[37] https://www.ea.govt.nz/operations/wholesale/security-of-supply/security-of-supply-policy-framework/.

the investigation period. Accordingly, we do not consider that this aspect of the claim is made out, and therefore could not threaten confidence in, or the integrity of, the wholesale market.

9.116 We found some information asymmetry in relation to gas outage information, but it was small. We considered whether that small asymmetry could have caused inefficient outcomes in the wholesale market, but found that outcomes were unlikely to have been affected by the asymmetry. Accordingly, we do not consider that this aspect of the situation alleged in the claim threatened confidence in, or the integrity of, the wholesale market. However, our investigation highlighted issues around information disclosure and availability, and we will consider whether any of these issues warrant further attention once our work regarding alleged non-compliance with disclosure obligations in the Code is completed.

9.117 We found that the ASX market makers were compliant with their market making agreements, and that the hedge market did not 'fail' as alleged by the claimants. However, we are aware that the hedge market could be improved—we have a project in our indicative 2019/20 work programme that will address this. We do not consider that the shortcomings of the currently voluntary market making arrangements, which are a known feature of the current market design, threaten confidence in, or the integrity of, the wholesale market.

9.118 We agree with the claimants that spot prices were unusually high for that time of year and that there was a gas shortage during the investigation period. However, these are normal and expected features of the electricity market in New Zealand. We do not consider spot prices were excessively high given the underlying market conditions nor that high spot prices or the Pohokura gas supply shortage threatened confidence in, or the integrity of, the wholesale market.

10 Our analysis of the market indicates no threat to confidence or integrity

10.1 As outlined above, our second approach to investigating whether a UTS occurred was to look at market indicators to determine whether confidence in, or integrity of, the wholesale market were negatively affected.

10.2 We analysed markers of confidence and integrity for the spot and hedge market to determine whether they were negatively affected by wholesale market conditions during the investigation period.

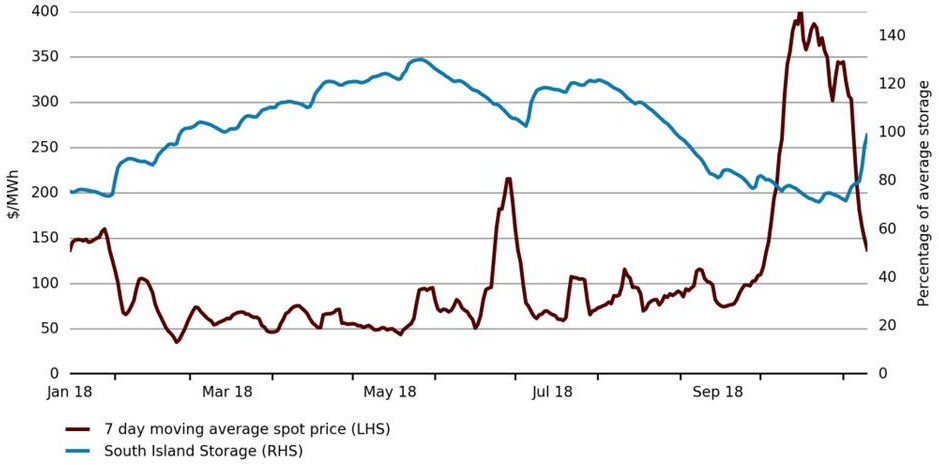
Spot market confidence and integrity indicators

10.3 The role of the spot market is to discover the price of electricity (ie, the price at which supply equals demand). It is not possible to perfectly replicate the spot market in a model, and so it is not possible to determine what spot prices *should be* in relation to a set of supply and demand conditions. However, we are able to look at spot prices and outcomes in the market and determine whether they are *consistent* with market fundamentals, including supply and demand. If spot prices and outcomes are consistent with market fundamentals, it shows the spot market has integrity, and that participants can have confidence in it.

Direction of price movements

10.4 We considered whether spot prices moved in a direction predicted by observed supply and demand. Figure 30 shows the seven-day moving average spot price, and hydro storage as a percentage of average. Figure 30 shows that as hydro storage falls, the spot price rises. This relationship is stronger during the investigation period because gas from Pohokura became scarce.

Figure 30: Spot price compared to hydro storage



10.5 We know that thermal generation 'firms' hydro. Put another way, when hydro storage is low and hydro generation is more expensive and runs less, thermal generation generally increases. This can be seen in the correlation between thermal and hydro generation. A negative correlation between thermal and hydro generation indicates that when one increases, the other decreases and vice versa.

10.6 From 2013 to 2017 the correlation between thermal and hydro was -0.41. In September and October 2018 the correlation was -0.01.

10.7 The negative correlation over the five years from 2013 to 2017 shows it is usual for thermal generation to increase when hydro storage is low. The correlation of approximately zero during September and October 2018 shows that thermal was unable to firm hydro. The most obvious explanation of this is lack of thermal fuel due to the gas outages.

10.8 This situation meant that spot prices moved more than they otherwise would in response to low hydro storage. This also resulted in hydro storage, which was already low, falling faster than normal because thermal generation was unable to play its usual role of firming hydro and therefore conserving hydro storage.

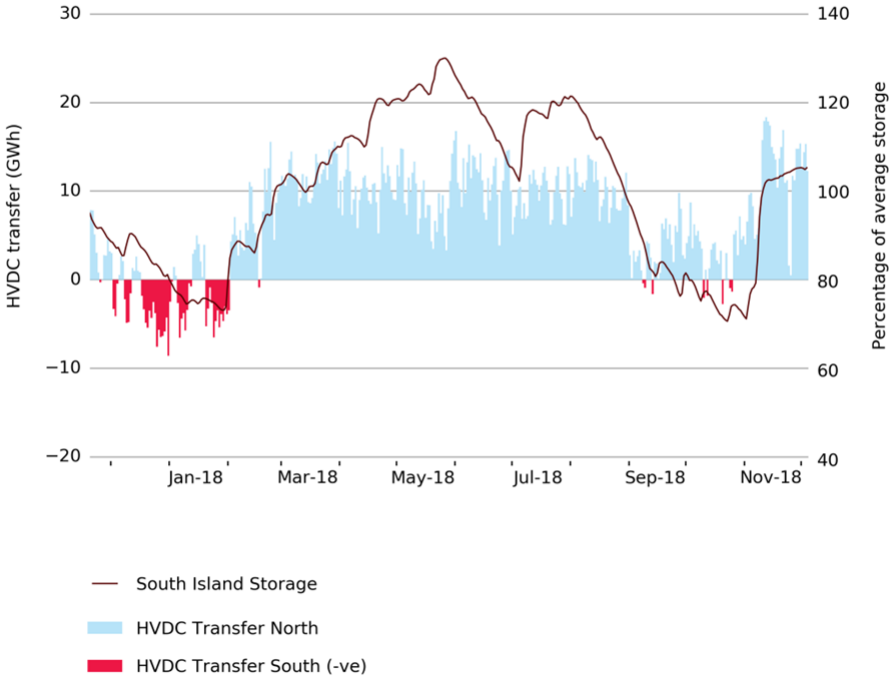
10.9 Our 2017 winter review contains analysis showing that price responds to storage most strongly during the spring.[38] This is because spring is when hydro generators begin to conserve water for the next winter. This phenomenon has become stronger since 2009. The most obvious cause of this is the experience of the dry year in 2008 and the consequent regulatory changes that created stronger incentives for conserving storage.

[38] https://www.ea.govt.nz/monitoring/enquiries-reviews-and-investigations/2017/winter-2017-review/.

HVDC flows

10.10 One effect of thermal being unable to firm hydro was that the HVDC did not flow southwards as much as expected. Figure 31 below shows daily HVDC transfer and the percentage of average storage. It shows that when storage fell below average during January 2018, the HVDC flowed strongly southwards. However, in October 2018 when storage fell to similar levels, the HVDC hardly flowed southwards at all. What we would expect to happen when water becomes scarce is that hydro generators increase their offer prices, thermal generators get prices that make it profitable to run, and the HVDC would flow southwards. The fact that this did not happen is symptomatic of the lack of thermal fuel in the North Island.

Figure 31: HVDC flows and hydro storage



Overall demand

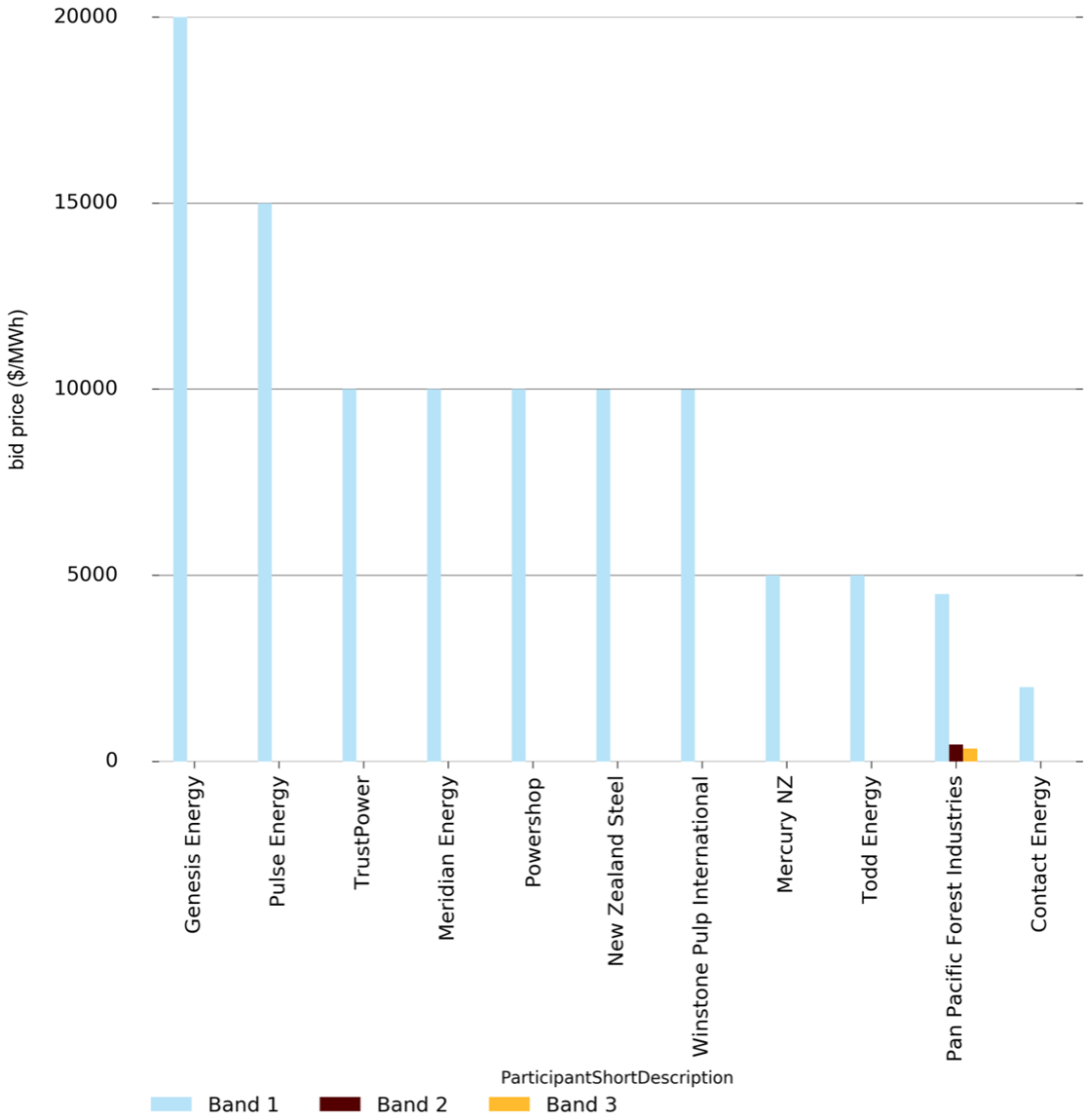
10.11 All else being equal we would expect spot prices to be higher when demand is higher, particularly when supply is constrained. As shown above in Figure 12 and Figure 13, demand during the investigation period was higher than recent years, both in general and at Tiwai.

Demand response

10.12 One function of spot prices increasing is to signal to purchasers of electricity that they should reduce consumption. This sort of demand response can mean lower spot prices and less stress on the power system. An obvious place to observe demand response to spot prices is at non-conforming nodes. These nodes are dominated by industrial users that are responsible for forecasting load at their node. Those industrial users must also submit bids—the quantities that they are willing to reduce and the prices that they are prepared to reduce these quantities at.

10.13 Figure 32 below shows bid prices at non-conforming nodes as at October 2018. Many of these prices are very high—much higher than prices observed during the investigation period.

Figure 32: Demand response prices

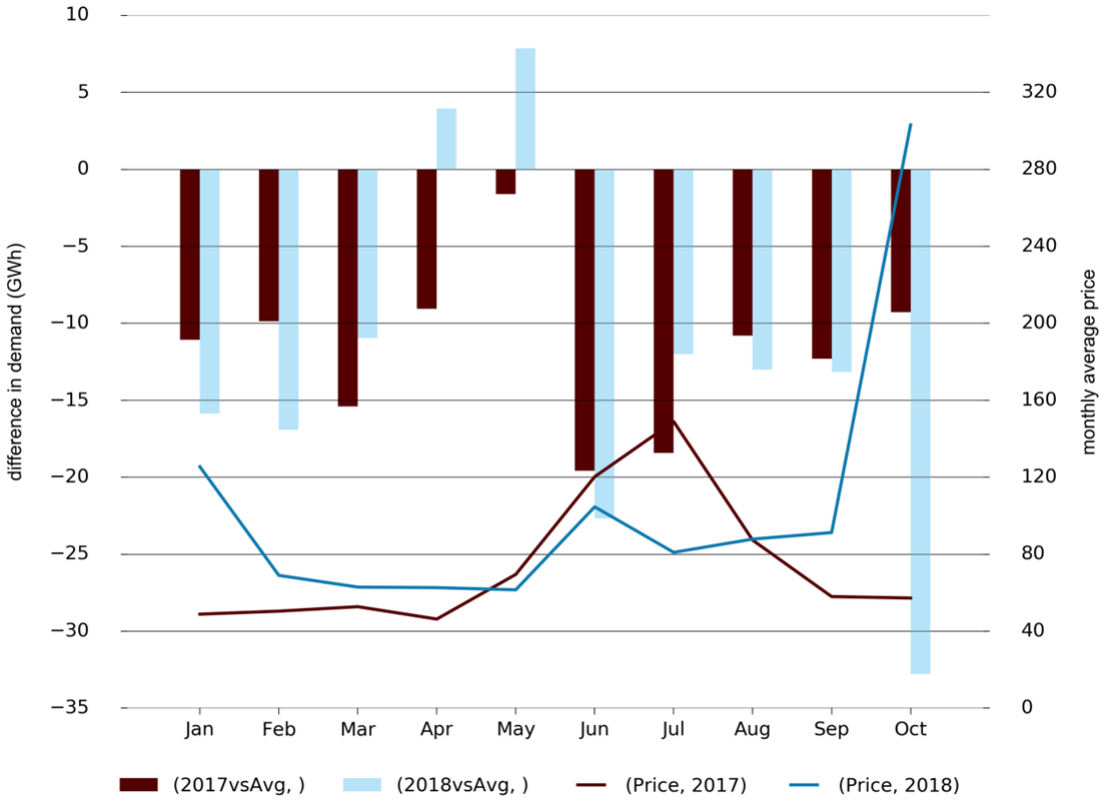


10.14 We also surveyed nine MEUG members who told us that it would take much higher prices for them to reduce demand than the prices that occurred in October 2018.

10.15 However, we can observe some demand reduction in response to high spot prices. Figure 33 below shows spot prices and year on year demand changes for non-conforming nodes excluding Tiwai and Ashburton.[39] The data show that there is demand response at these nodes, and that the higher the spot price the more demand response there is. This can be seen when winter 2017 is compared with October 2018. In October 2018, spot prices were higher than in the winter of 2017, and demand response was correspondingly greater.

[39] Ashburton is excluded because the load is dominated by irrigation, and therefore is less discretionary.

Figure 33: Demand response (excluding Tiwai and Ashburton)



10.16 Together, these figures and our discussions with MEUG members suggest that there is demand abatement available but it is costly. Spot prices in October 2018 were sufficient to entice large scale industrial users to reduce demand somewhat, but not to incentivise large scale demand reduction. This shows that October 2018 prices were useful in the sense that they incentivised some demand reduction.

Hydro offers pricing up

10.17 We can observe that hydro offers over the investigation period were priced up. It is likely that this was a result of higher demand, and a perception of higher risk of a hydro storage shortage in 2019. This can be observed in Figure 34 and Figure 35 below. The blue band is the investigation period.

10.18 Figure 34 shows the daily average load weighted offer price for Waikato and Waitaki over 2017 and 2018. Figure 35 shows the daily offer volume that was priced above $1000/MWh for Waikato and Waitaki over 2017 and 2018.

Figure 34: Waikato and Waitaki offer prices 2017 and 2018

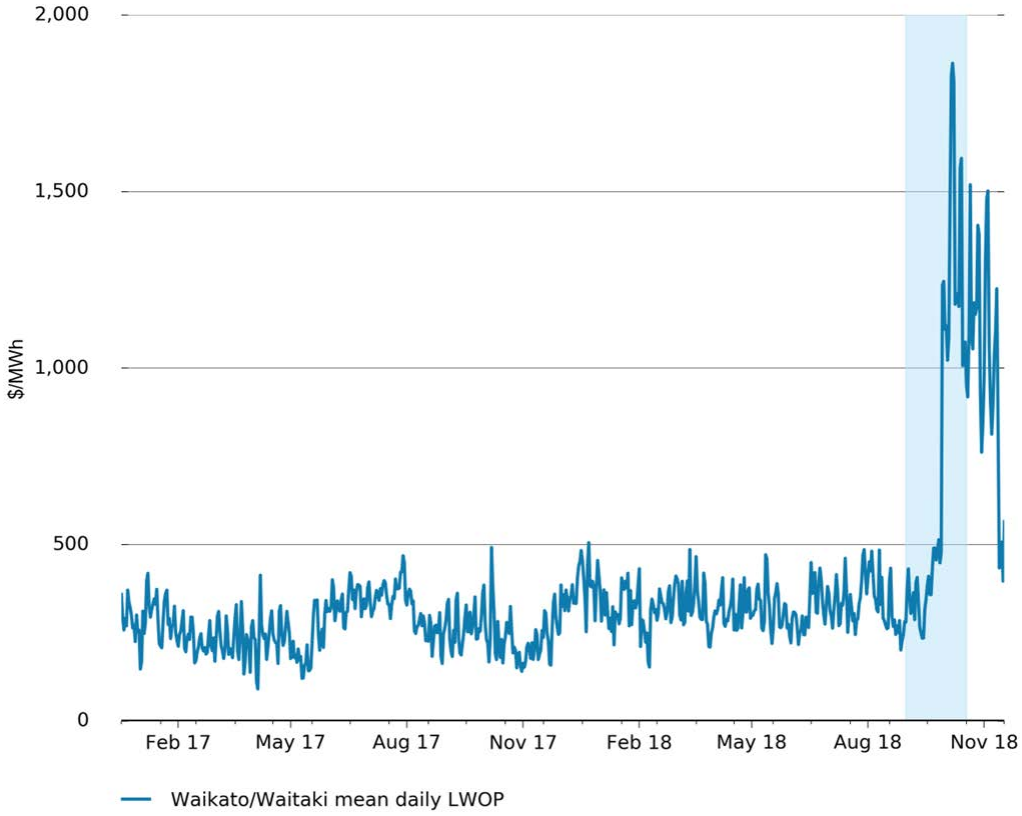
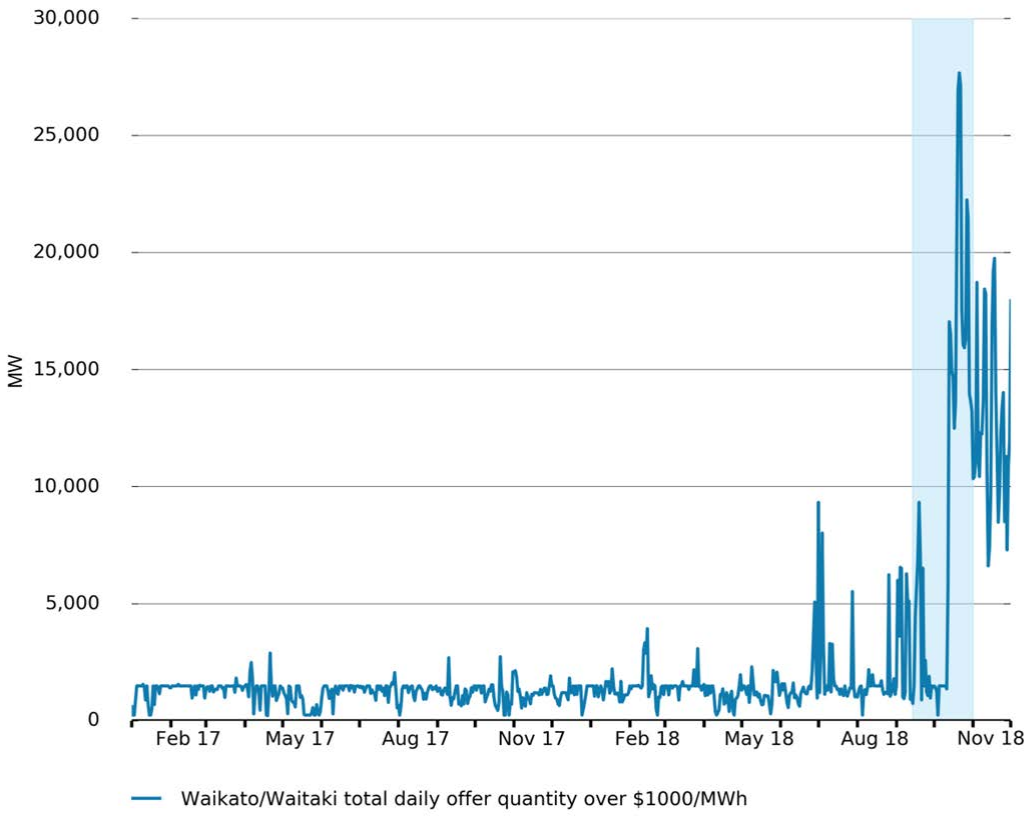


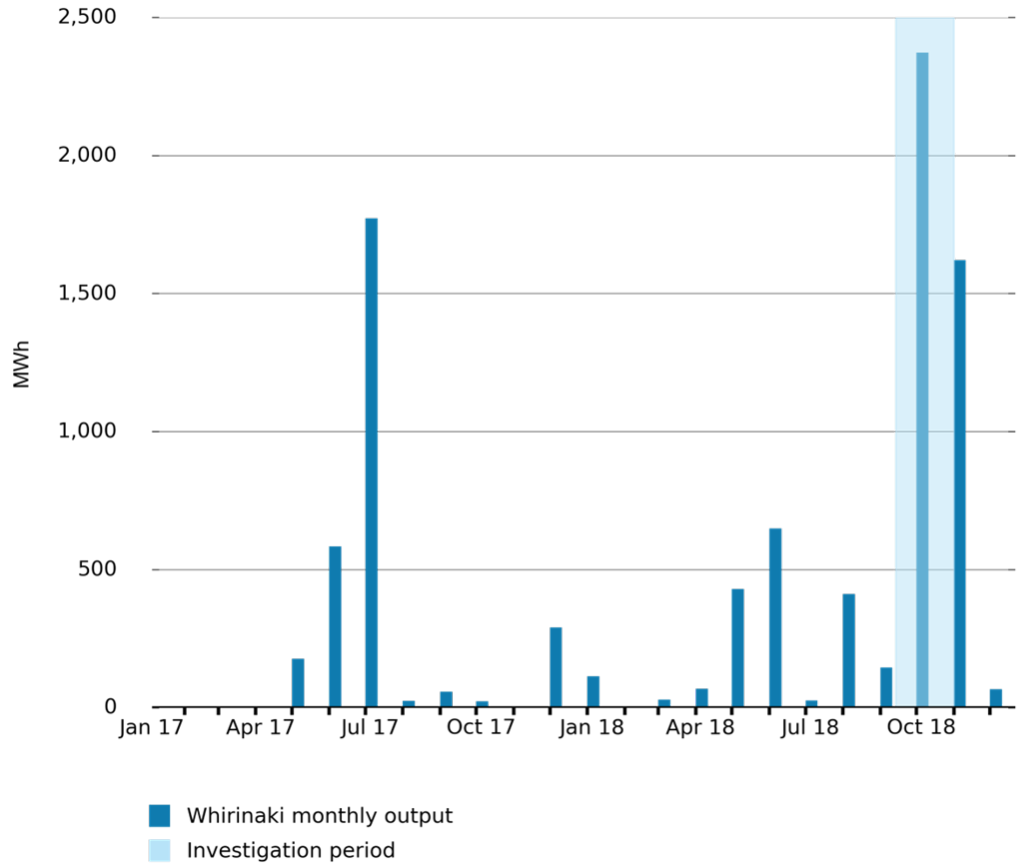
Figure 35: Waikato and Waitaki offer prices over $1000/MWh 2017 and 2018



Non-fuel constrained plant being dispatched

10.19 With hydro storage low and the gas supply constrained, coal and diesel fired plant could be expected to run harder. This is what happened. Genesis made public statements during the investigation period regarding running the Rankine units on coal. In addition, the largest diesel fired plant (Whirinaki) also ran at comparatively high levels. Figure 36 shows Whirinaki's daily output for 2017 and 2018. The highest peak is during the investigation period. This indicates that Contact preferred to run an expensive diesel plant rather than its more efficient gas fired plant or its hydro. Again this is what we would expect when gas supply is constrained.

Figure 36: Whirinaki monthly output 2017 and 2018



Conclusion on spot market indicators

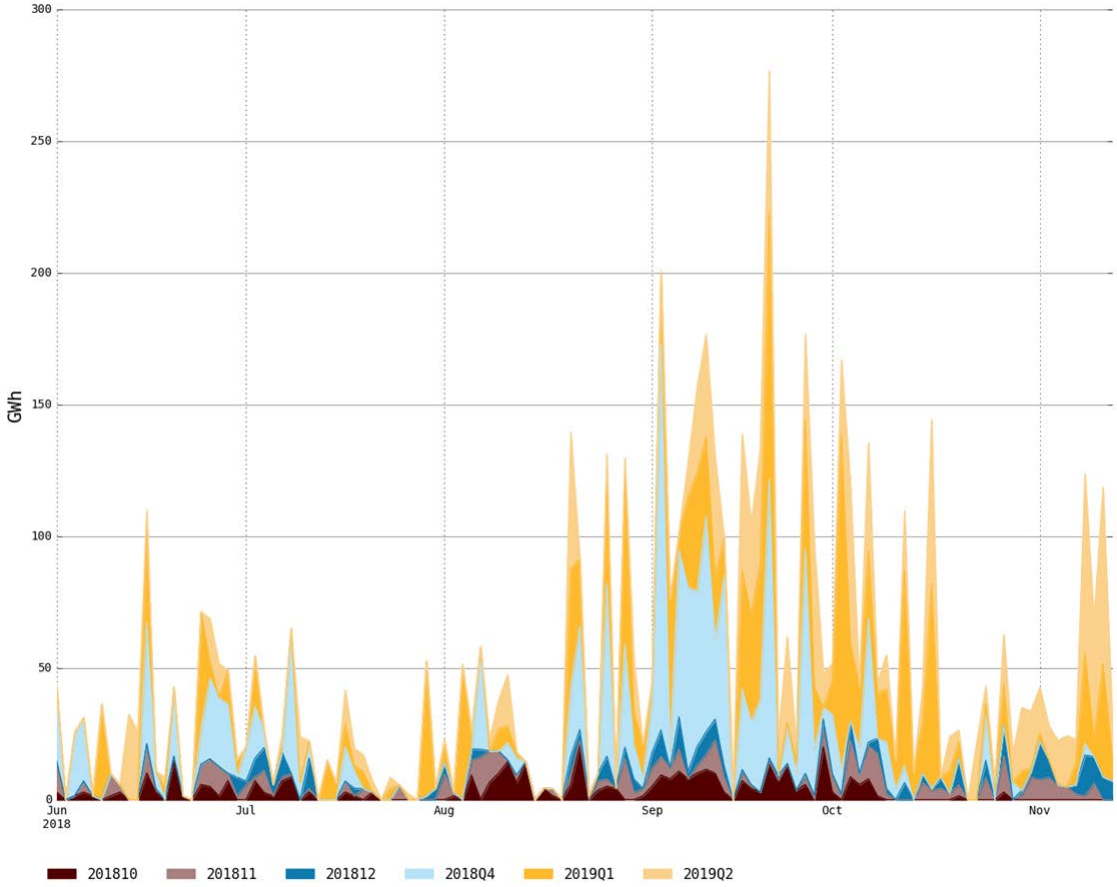
10.20 Overall we conclude that the spot market outcomes and indicators are explainable and make sense given the underlying conditions. The consistency between underlying conditions and the spot price should increase confidence in the spot market.

Hedge market confidence and integrity indicators

10.21 Unlike trading on the spot market which is mandatory for all physical electricity purchases, participants can choose whether they trade electricity hedge contracts. Accordingly, we consider that participation rates in the hedge market are a good indicator of confidence in that market.

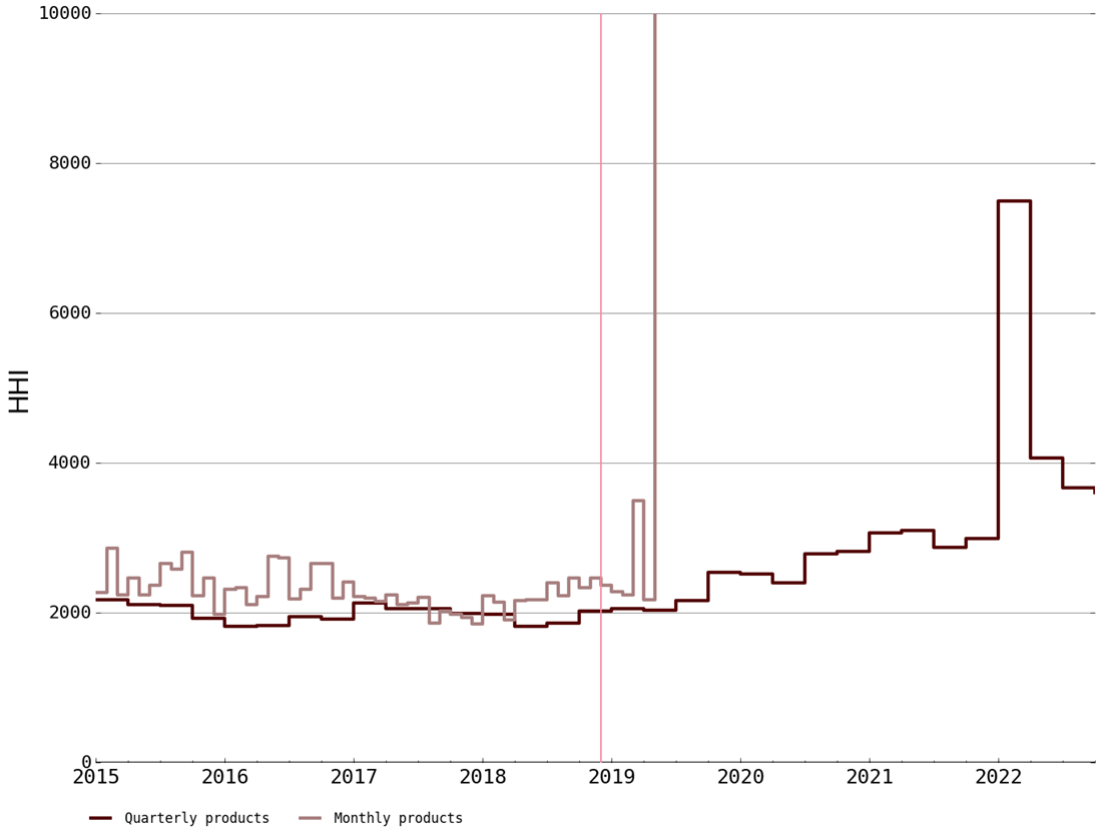
10.22 Figure 37 below shows that trading in short dated ASX contracts did not collapse and continued during the investigation period and in November 2018.

Figure 37: ASX short dated trading volumes



10.23 Figure 38 below shows HHI values for ASX products over time. HHI is a measure of market concentration. If participation had reduced in the market for ASX contracts we would expect the HHI to increase. However, the HHI values show that concentration levels have not materially changed. The spike in monthly HHI is due to longer dated contracts being thinly traded. The high HHI will typically fall as the contract approaches maturity and it is progressively more heavily traded.

Figure 38: ASX market concentration indicators[40]



10.24 As shown above in Figure 5, UOI in ASX contracts significantly increased over the last quarter of 2018.

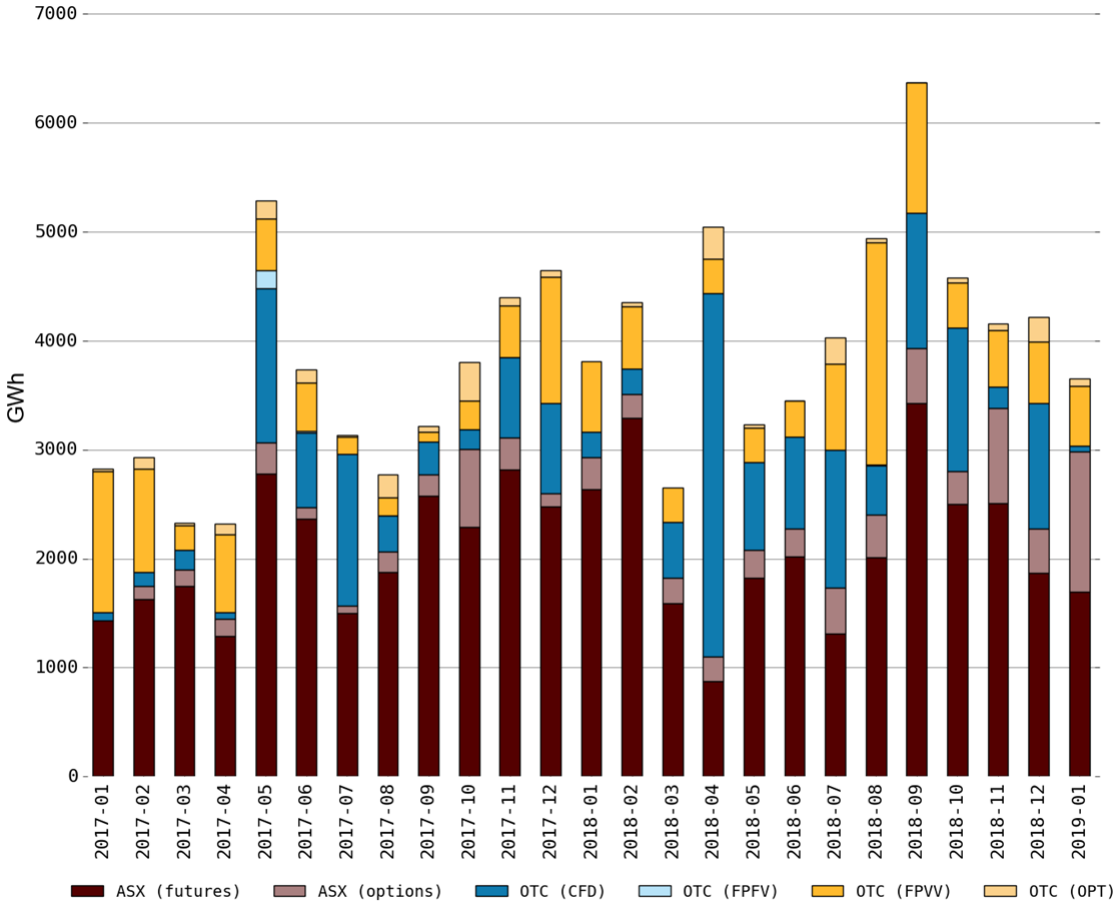
10.25 As shown in Figure 6, bid ask spreads widened significantly over the investigation period. However, bid ask spreads had recovered by early December 2018. For example, spreads for Q1 2019 contracts recovered in mid-November 2018 and spreads for January 2019 monthly contracts began to recover at about the same time before falling under 5% in early December 2018. The pattern is similar for other near-term contracts. Spreads widened again for many ASX products over the New Year period, however, this is outside the scope of the investigation and does not appear to be related to gas supply issues.

10.26 This pattern of recovery is similar to the pattern observed during the winter of 2017.

10.27 Figure 39 below shows trading volumes for ASX and non-ASX hedge contracts. There is no observable reduction in trading volumes.

[40] Source: ASX

Figure 39: ASX and non-ASX trading volume



Conclusion on market indicators

10.28 In the paragraphs above we considered a number of confidence and integrity indicators relating to the spot and hedge markets within the wholesale market. The indicators do not, either individually or as a whole, support a conclusion that confidence in, or integrity of, the wholesale market was threatened by the situation that occurred during the investigation period.

Appendix A UTS claim

CLAIM OF UNDESIRABLE TRADING SITUATION

ELECTRICITY AUTHORITY
TE MANA HIKO

(UTS)

CONTACT DETAILS

Reporting Organisation:	**Electric Kiwi Limited**
Contact Name:	Luke Blincoe
Email:	luke.blincoe@electrickiwi.co.nz
Phone:	N/A
Mobile:	027 601 3142
Fax:	N/A

Reporting Organisation:	**Flick Energy Limited**
Contact Name:	Stephen O'Connor
Email:	steve.oconnor@flickelectric.co.nz
Phone:	N/A
Mobile:	021 574 808
Fax:	N/A

Reporting Organisation:	**Pulse Energy Limited**
Contact Name:	Gary Holden
Email:	gary.holden@pulseenergy.co.nz
Phone:	09 378 9981

Mobile:	N/A
Fax:	N/A
Reporting Organisation:	**Switch Utilities Limited (Vocus)**
Contact Name:	Johnathan Eele
Email:	johnathan.eele@vocusgroup.co.nz
Phone:	N/A
Mobile:	021 674 429
Fax:	N/A
Reporting Organisation:	**Vector Limited**
Contact Name:	Mark Toner
Email:	mark.toner@vector.co.nz
Phone:	09 978 7565
Mobile:	N/A
Fax:	N/A

WHEN CLAIMED UTS OCCURRED

Date: 15 September 2018 - ongoing as at the date of this Claim.

Time: _____

In addition to completing and emailing this form, please also notify the Authority by telephone at **04 474 2260**.

BASIS OF CLAIM

Why is this event an "undesirable trading situation"?

Please specify why a UTS is claimed – refer to the definition of a UTS set out below:

Clause 1.1(1) of the Electricity Industry Participation Code 2010 (Code) - Meaning of undesirable trading situation

undesirable trading situation means any situation—

(a) that threatens, or may threaten, confidence in, or the integrity of, the **wholesale market**; and

(b) that, in the reasonable opinion of the **Authority**, cannot satisfactorily be resolved by any other mechanism available under this Code (but for the purposes of this paragraph a proceeding for a breach of clause 13.5A is not to be regarded as another mechanism for satisfactory resolution of a situation).

Describe why in your view the claimed UTS is a situation that threatens, or may threaten, confidence in, or the integrity of, the wholesale market.

This claim is made jointly by independent retailers representing 86% of customers not served by vertically integrated retailers (hereafter: 'gentailers'): Electric Kiwi, Flick Electric, Pulse and Switch Utilities (Vocus), and the largest network company Vector (which is majority-owned by New Zealand's largest consumer energy trust - Entrust).

The claimants note the Authority's recent public statements regarding current prices. The Authority has attributed high spot prices to the combination of low lake levels and problems at Pohokura. The claimants do not consider these factors explain the present market situation. The claimants urge the Authority to reconsider its view in light of the matters put forward in this claim.

An undesirable trading situation (UTS) is claimed for the period from 15 September[1] onwards (i.e., it is ongoing). The situation differs materially from previous UTS applications lodged with the Electricity Authority (EA) in that it results from a confluence of factors; those being:

- potential *force majeure* events impacting gas supply;
- failure of market-making in the contacts market;

[1] https://www.youtube.com/watch?v=jT0rKmLU73M&feature=youtu.be This is based on analysis that suggests the Pohokura outage started at or around 15/9/18. It should be noted that issues with the contracts market preceded that date.

- sustained atypically high spot prices that appear to be at least partly attributable to the coordinated exercise of market power; and
- a blatant disregard for disclosure obligations.

These factors have undermined the confidence in, and the integrity of, the wholesale market and threaten the viability of independent electricity retailing in New Zealand and competitivity of major users. The claimants consider there is a current and ongoing undesirable trading situation which the Authority should correct – as required by clause 5.5 of the Code – as soon as possible.

The failure of market making obligations in the contracts market (a problem well-known to the EA) and a lack of transparency exposes independent retailers and industrial consumers to the strategic and coordinated exercise of market power by gentailers with natural hedges. Put simply, without adequate contract cover, retailers and consumers are simply wholesale market price-takers. This is problematic in the best of circumstances, but it is many magnitudes worse when supply constraints emerge.

The current conditions provide gentailers with an opportunity to strategically increase their offers, thereby driving up spot prices, and to attribute those increases to water and gas shortages. As explained below, there is good reason to think that this is what is happening at present. Indeed, although supply constraints can undoubtedly be expected to have increased spot prices significantly, it is difficult to see how they could have driven them to the unprecedented levels seen in the last month.

Regardless of the cause, the high spot prices coupled with the demonstrable failure of the contracts market will push independent retailers out of the market. Indeed, at the time of lodgement, Payless Energy had already ceased business. If independent retail competition is reduced there will be less competitive pressure on prices. Consumers will end up paying more and miss out on the benefits of innovation.

This necessitates immediate action from the EA to implement changes to address market failures and restore confidence in, and the integrity of, the wholesale market.

This claim is obviously being made while the Government's Electricity Price Review is underway. The Electricity Review Panel and the Minister of Energy will consequently be informed of this claim and the immediate need for changes to regulatory arrangements, monitoring and enforcement. For the avoidance of doubt, the changes which may result from the Review are not an alternative "mechanism available under [the] Code" for resolving the undesirable trading situation. The Authority should act now and exercise the powers it has already been granted to correct the situation.

SUSTAINED ATYPICALLY HIGH SPOT PRICES

From the 6th of October there have been sustained, atypically high prices in the spot market. These prices have differed so dramatically from historical norms as to give

rise to a UTS, irrespective of what has driven them to these levels (we explore the two possible explanations below). The chart below illustrates the wholesale market prices from 6 October - 4 November 2018 compared with those seen over:

- the 30 days immediately preceding this window (i.e., from 8 September - 6 October 2018); and
- the corresponding 30-day period from the previous year (i.e., from 7 October – 5 November 2017)

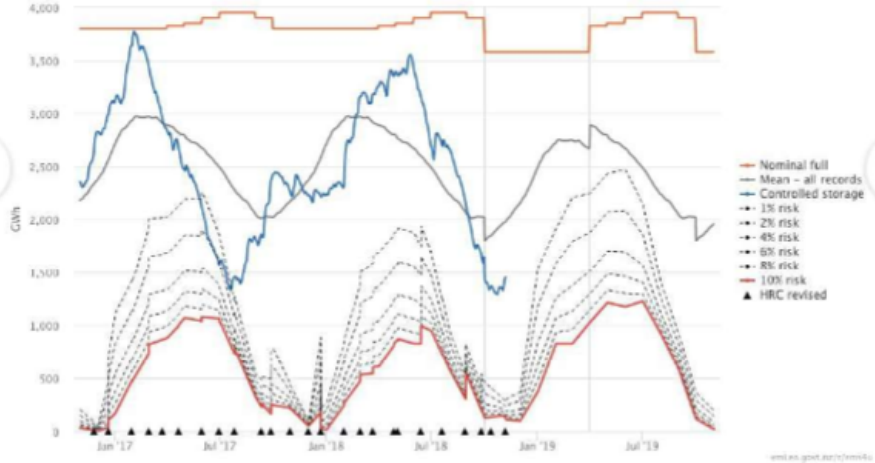
The contrast is stark. Over the period 6 October - 4 November 2018, the average spot price was **$329.85/MWh**. For the 30 days prior, it was **$99.26/MWh** and, in the same month in the previous year (i.e., from 7 October to 5 November), it was **$66.15/MWh.** Spot prices for the last month have therefore exceeded by a substantial margin the level that could reasonably be described as 'normal'.

The Electricity Authority has cited low storage lake levels and production problems as the Pohokura gas field (and a scheduled inspection at the Kupe field) as potential drivers of the sustained high spot prices. These factors may explain *some* of the increase that has been observed over the last month or so. However, as we foreshadowed earlier, it is difficult to see how these matters could reasonably account for *all* of that sustained and substantial uplift. We reach that conclusion because:

- although lake levels are *lower than normal* for this time of year (i.e., they are among the lowest 10% of historic storage levels), they are not the *lowest on record*, whereas, the average monthly spot price for the last 30 days has been **more than $200/MWh higher** than the previous highest October monthly average ($102/MWh) – a conspicuous difference;
- there continues to be significant unutilised reserves and there have been no security events; and

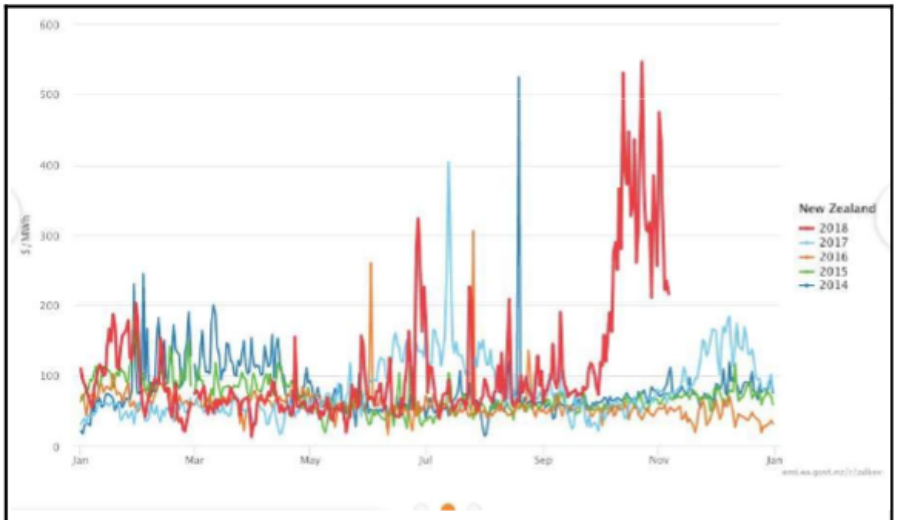
- while the System Operator (which has a responsibility under s8 of the *Electricity Industry Act 2010* to provide information on all short- and long-term aspects of security of supply) has noted the disruptions to gas supply, it has not raised any heightened concern about the ongoing security of supply that would justify the type of price increases that have been observed over October[2].

The current spot prices therefore appear to exceed significantly what is reasonable given the available generation, lake storage levels and the current security of gas supply.[3] As illustrated below no risk curve has been crossed.[4]

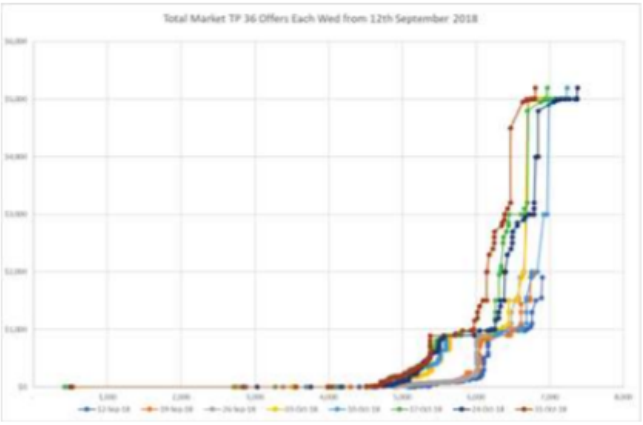


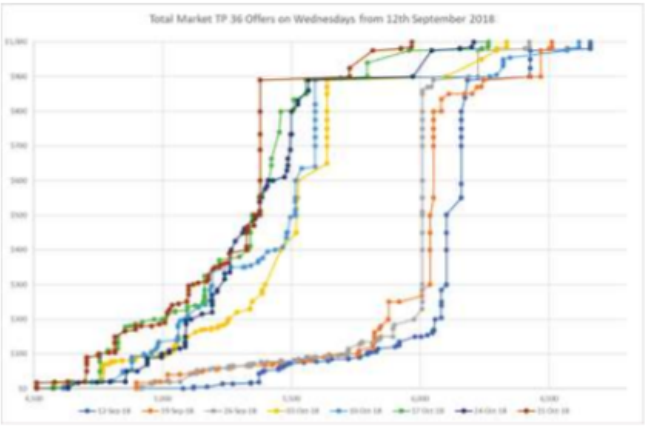
Further, as illustrated in the chart below[5], current prices also stand out as markedly elevated, especially when considering winter 2017 was a dry event where the risk curves were crossed.

[2] The ongoing gas shortages are examined in more detail in our subsequent discussion of the gentailers' ostensible disregard for their continual disclosure requirements.
[3] Prices now are higher than they were in October 2008 when there was a genuine and extreme shortage.
[4] https://www.emi.ea.govt.nz/Environment/Reports/3UN1KD
[5] https://www.emi.ea.govt.nz/



Rather, the prevailing spot prices reflect a lack of competitive tension at the wholesale level. The charts below show the market supply curves for trading period 36 on each Wednesday from 12th September 2018. The second chart shows a zoomed in view for prices below $1000 and demand greater than 4,000 MW. Comparing the supply curves of October to September it is clear that all forms of generation are getting bid in at much higher prices, the steepening incline demonstrates the lack of competitive tension on prices. To put this change in perspective there was 409MW between the $50 point on the curve and the $100 point on the 12th Sep 2018 and 47MW between the same two points on the 31st Oct 2018.





In our view, the sustained high prices coupled with a justifiable suspicion that a coordinated exercise of market power has been a key driver of those increases and has undermined confidence in and the integrity of the spot market. It therefore constitutes a UTS.

Even if those misgivings are misplaced and the spot price increases are attributable solely to the factors cited by the EA, a UTS *still* exists. This conclusion follows from examining the EA's mandatory 'Stress Testing' regime.[6] One of the scenarios that companies trading on the wholesale market must test is their resilience to a sustained period of high prices. Specifically, they should be capable of navigating successfully a period in which the average spot price at the Otahuhu node is **$250/MWh** for a quarter.

Over the period 6 October to 4 November, the average price at the Otahuhu node was **$335/MWh –** *well above* the threshold specified in the EA's stress test scenario. This is crucial because, if the factors flagged by the EA are, for the sake of argument, taken to be the sole drivers of the sustained period of high prices (a contention that we do not believe can be substantiated for the reasons already presented) then, logically, there would be no reason to think that they are going to drop any time in the near future. For example:

- unless there is a large volume of unseasonable rainfall, it seems unlikely that storage lake levels are going to increase by much (if at all) over the coming summer months; and

[6] These arrangements require companies trading on the wholesale market to model their financial resilience under two scenarios: a 'capacity shortage' scenario and an 'energy shortage' scenario'.

- the EA has indicated that the supply problems at the Pohokura gas field could persist until late November and output from Kupe will soon decline as well due to a scheduled inspection.

In other words, if the factors cited by the EA are the exclusive causes of the current market trends, then it follows that those high spot prices will *continue* for the foreseeable future, i.e., throughout November and probably well beyond. There would then be a distinct possibility that the average quarterly spot price at the Otahuhu node from the beginning of October to the end of December will exceed – perhaps by a considerable margin – the extreme $250/MWh threshold defined in the EA's stress test scenario.

The prospect of one of the EA's stress test scenarios being breached itself also constitutes a UTS - irrespective of what has driven prices to those levels. Indeed, it would seem counterintuitive to wait until that extreme scenario had come to pass before acting – indeed, as explained below, by that time it may be too late, i.e., other independent retailers may have been forced to follow Payless Energy out of the market. In short there are two possibilities in play, – either one of which should prompt a finding that a UTS has occurred; namely:

- the unusually high spot prices have been driven at least in part by the coordinated exercise of market power by generators (a conclusion bolstered by recent conduct in the contracts market, as explained below); or
- the factors cited by the EA are the sole drivers – in which case there is a high probability that its own 'energy shortage' stress test scenario will be breached in coming months, which should prompt immediate action.

Regardless of which explanation applies, the confidence in and the integrity of the spot market has been undermined. Indeed, the sustained high spot prices[7] are threatening the very existence of some independent retailers. As mentioned earlier, Payless Energy has exited already, two others are on the cusp of departing and there may be more to follow. Purchasers are facing settlement costs that have tripled compared to weeks prior, which has had flow-on impacts for their prudential requirements. The cash-flow implications of meeting these thresholds are challenging – even for the very well-capitalised and those purchasers that have achieved a fairly well-matched contract position.

Furthermore, it is not reasonable to contend that independent retailers or industrial consumers should be forced to weather these spot prices because they chose not to procure full contract cover. Any such assertion would rest on the unsound presumption that the contract market was working properly by offering adequate hedging cover at predictable, reasonable prices. It was not – and is not. This should come as no surprise to the EA since, as it is doubtless aware (and as explained in more detail below), gentailers have chosen to disregard their voluntary market-maker

[7] Coupled with the lack of liquidity in the contract market – a matter we discuss below

obligations. This placed independent retailers in a 'Catch-22' scenario, whereby they had to decide whether:

- to accept contract prices that were substantially more expensive than what could be considered reasonable at the time; or
- remain less-than-fully hedged, thereby exposing themselves subsequently to unconstrained spot prices.

When faced with this 'Clayton's choice', many independent retailers and industrial consumers opted for the latter – a perfectly explicable decision in the circumstances. If the high spot prices that ultimately eventuated force even more independent retailers to exit the market, then New Zealand's electricity customers will face a 'double-whammy'. Those customers on spot-based plans (e.g., a great many of Flick's customers) will feel the acute near-term financial impacts of the higher wholesale prices via their retail bills. And *all* customers will experience higher prices over the longer-term if the departure of retailers reduces further the effectiveness of competition in the retail market.

Sustained high spot prices – potentially those that are well above the underlying costs of supply – also place an unnecessary drag on wider economic activity, with attendant adverse effects on productivity and growth. By way of indications, the high spot prices that have been seen over the course of October have caused some major industrial consumers to have to reduce their production by over 50%. This excerpt from the Major Electricity User Group (MEUG)'s monthly newsletter to members is apposite:

> 'If the current situation is a window to a future with constrained, or no, domestic gas production and supply and higher energy prices whether due to intermittent renewable electricity supply, higher carbon costs, or some other reason, then the view is not particularly attractive. With hydro and wind generation limited, Genesis have had to import coal and in turn produce twice the emissions than if they had a secure supply of gas. The economic costs and potential consequences are high too. MEUG members generate $30 billion in revenue for the economy and directly employ over 25,000 people. For process heat there are few, if any, viable alternatives to gas. But many members are now on reduced gas supply, with some having had contract gas quantities halved.'

CONDUCT AND OUTCOMES IN THE CONTRACT MARKET

The contracts/hedge market is a fundamental part of a properly functioning wholesale market.

Part 1 of the Code defines the **wholesale market** as:
(a) the spot market for electricity, including the processes for setting–
i. real time prices:
ii. forecast prices and forecast reserve prices:
iii. provisional prices and provisional reserve prices:
iv. interim prices and interim reserve prices:
v. final prices and final reserve prices:
(b) markets for ancillary services:
(c) the hedge market for electricity, including the market for FTR

Where the contracts market disintegrates the generators have unconstrained market power because of the removal of the wholesale price tension and lack of ability for purchasers to protect themselves. Contracts market failure in itself is a UTS.

The problems highlighted in the spot market have also manifested in the contract market. In particular, the conduct of several of the vertically integrated gentailers suggests that market power is being exercised in a coordinated manner, driving up both spot and contract prices. As mentioned above, this is demonstrated most clearly by the brazen step taken by the largest gentailers to withdraw from their voluntary ASX market-maker obligations.

The EA has, on numerous occasions, determined that market-maker obligations are necessary. Yet, despite that finding, it has decided repeatedly against imposing any explicit requirements on those generators in the Code itself. The EA has instead been happy to rely upon the obligations agreed to voluntarily by the four largest generators with the ASX – undertakings that are not binding.

The voluntary market-maker agreements include a fixed volume that will be applied to both the bid and ask at a fixed spread for all contracts that the agreement covers. The spread between the bid and the ask was originally set at 10% and later reduced by mutual consent of the market-makers to 5%. However, those market-maker agreements rely on mutually reinforcing conduct: unless your fellow participants also post bids and asks at the agreed spreads, the arrangement collapses. This latest episode has exposed harshly the inadequacies of the current framework.

The four market-makers appear to have either lost confidence in one another, or to have made a conscious decision to eschew from their commitments for financial reasons, i.e., to boost their wholesale profits. Whatever the reason, they have all refused to honour their market-maker commitments, resulting in a substantial deterioration in liquidity. The following chart shows the percentage spread on daily basis. The three lines are the minimum spread on the day of all contracts, the average spread of all contracts and the maximum spread on the day.

The chart reveals that, throughout most of the year, the maximum spread on each day has been less than 5%. Spreads started to widen on 7 September – initially in the current and next-monthly contracts. This then quickly moved to all the monthly and

the first 3 quarterly contracts. By early October, the market-maker obligations were well and truly out the window, with average spreads over all contracts out to 2022 increasing to 10%-18%. By the time gas constraints started to hit the market, spreads reached levels bordering on the absurd – up to 66% in some instances.

With spreads at such levels, purchasers without natural hedges could have had no confidence that they were being offered a price that reflected the real future cost of production. As we explained above, this placed those independent retailers in a no-win situation. They could either purchase contract cover at what appeared, by any measure, to be unreasonable prices, or they could remain unhedged and take on the wholesale spot price risk.[8] Unsurprisingly, many opted for the latter, as evidenced by the sharp reduction in contracts traded over October versus September.

Type	Number of Contracts
Monthly Sep	5,381
Monthly Oct	3,608
Quarterly Sep	8,780

[8] Had those independent retailers had access to reasonably 'Caps' contracts,[1] then this problem may not have so acute. A 'Caps' contract is one in which the counterparty agrees to remit to the retailer the difference between a specified price and spot price for a specified volume of electricity whenever the pool price exceeds the specified (contract) price – usually $150/MWh or $300/MWh. In exchange, the retailer agrees to pay a set monthly premium. The contract applies to a specified volume of electricity in certain time periods. The effect of the cap is to protect the retailer against prices above a certain level for that specified volume during the periods covered by the contract. However, these products are still not available on the ASX platform.

Quarterly Oct	4,706

Simply put, throughout the period in question, independent retailers have been left exposed to substantially higher wholesale market costs against which they cannot adequately hedge in light of the prevailing contract market conditions. Meanwhile, the vertically integrated generators that are net sellers have undoubtedly benefited from those higher spot prices. It should therefore come as no surprise whatsoever that independent retailers are starting to exit the market.

To summarise, the recent conduct of the large gentailers has reduced liquidity, compromised the ability of non-vertically integrated purchasers to hedge effectively against high spot prices and, in all likelihood, improved substantially the profitability of their own businesses. The likely exit of multiple independent retailers consequently raises fundamental questions about whether hedging instruments can truly serve as a viable substitute to owning generation. This undermines clearly the integrity of and the confidence in the contract market.

FLOUTING MARKET DISCLOSURE REQUIREMENTS

The trading arrangements contained in Part 13 of the Code subject market participants to strict continuous disclosure obligations. Section 13.2A compels market participants to disclose any information they have about themselves that they expect will have a material impact on the prices in the wholesale market if it was to become public. Market participants are required to make such information readily available, free of charge, as soon as reasonably practicable after they become aware of it.

These obligations are crucial to the operation of the wholesale market. The existence of insider information leaves the market susceptible to manipulation by those parties that are privy to it, which inevitably undermines confidence. To that end, throughout the period of sustained high prices, the following information has not been disclosed in the timely fashion required by the Code.

Significant change in generation capability: Contact Energy
Contact Energy (Contact) has routinely waited until near or after the close of business to declare high impact shutdowns of its gas fired generation in the Taranaki region, despite compelling evidence from bid-offer stacks that the outages were planned and that the company was aware of the outages up to several hours before disclosure.

A severe example of this behaviour occurred on 31 October when at 3:32pm the 350MW Taranaki combined cycle generator was placed on full outage for more than 11 days, effective from 10:30 pm that evening.

- The outage was reflected in Contact's bid stacks from 3:24pm, which themselves would have taken time to prepare (i.e., this implies that Contact was aware of the outage well before 3.24pm).

- The commencement time of the outage coincided with the end of the evening peak (more than six hours after the bid stacks changed) and its extended nature indicates that the decision to take the unit off-line was very likely to have been made earlier in the day, i.e., this was plainly not a rushed decision.
- The tardy disclosure bought extra time for Contact to adjust its own bid stacks and to make decisions about its hedge book, particularly with regard to November. It also severely compromised the ability of other market participants without that inside knowledge to process and react to the information during the ASX trading window that had already commenced. The November contract at OTA settled 20% higher the following day.

The above example is indicative of a pattern of late disclosures by Contact. It was not a one-time oversight. Rather, it sits alongside three other material TCC outage announcements that Contact has made since 19 October – none of which were disclosed in a timely fashion. One occurred at 3:59pm and the two others occurred after the 4pm close of ASX trading. In addition, a 200MW outage of the Stratford peakers was announced at 4:19pm on 5 November and a 105MW outage of TCC on 10 October was disclosed an hour after bid stacks were updated.

The 19 October case is worth special mention. A 200MW outage lasting until 28 October was declared at 5:47pm that day, but analysis of bid stacks shows that they were changed to reflect the outage from 3:10pm that afternoon, and the unit was gradually ramped down from 5pm. The outage disclosure was delayed until after the close of business despite Contact clearly having decided to take the unit off-line for a prolonged period more than two and a half hours earlier.

In summary, Contact has not disclosed its recent significant outages as soon as was reasonably practicable, and the consistency with which major outages have been declared after the close of business indicates that this has been a deliberate practice.

Significant change in generation capability: Genesis Energy

Genesis Energy has failed entirely to disclose the unavailability of its HLY_5 generating unit to the market (in POCP or otherwise) on multiple occasions since 24 September.

- On a running basis from 25 to 28 September offers for HLY_5 generation were set to zero for approximately the 12am to 5am period and the plant did not run. The offers were removed generally one to two days in advance.
- From 1 to 5 October HLY_5 ran at approximately 200MW. Analysis of bid stacks shows that Genesis gradually pulled offers for generation above this level on 1 October and for the majority of the 2 to 5 October period the maximum generation offered was 200MW.
- In the majority of weekdays from 8 to 26 October HLY_5 was again shut down completely in the early morning periods.

- While Genesis Energy may argue that Unit 5 was not on a maintenance outage and not required to be entered into POCP, it is obvious that the plant's availability was reduced for an extended period due to gas supply issues and this reduction in availability should have been disclosed to the market (in POCP or otherwise)

Significant change in fuel supply situation: Genesis and Contact, possibly other participants with long term gas supply contracts

Despite the obvious reality that their normal fuel supply has been disrupted, none of the major generators have disclosed changes to their fuel supply situations since Pohokura began experiencing problems in early September.

- Analysis of HLY_5 bid stacks and the deployment of coal in the Huntly rankine units clearly indicates that Genesis Energy began receiving advanced warning of gas curtailments as early as 2 September.
- As noted above, this change in fuel supply situation resulted in full shutdown of HLY_5 on the mornings of 25 to 28 September, reduction to 200MW availability from 1 to 5 October and morning shutdowns on weekdays from 8 to 26 October.
- Contact has declared two major outages to its generating plant.
- Consistent with bid-stack analysis, feedback from market sources indicates that generators with gas powered units have been receiving *force majeure* notices on their contracted gas supplies.
- On the 18th of September an OTC trade for 56400MWh (50MW) in Zone E was executed. The timing of the trade, from 26 October to 11 December 2018, closely aligns with the November HLY_5 gas outage. It is considered likely that Genesis Energy bought South Island cover for this outage while in breach of outage disclosure guidelines with regards to its fuel supply situation, inappropriately securing $5 million in profits from a single trade (conservatively assuming a $100 move in the contract's value). This hedge disclosure and Genesis' spot market bidding behaviour in mid to late September constitutes extremely strong circumstantial evidence that it was active in the hedge market whilst withholding crucial details about its fuel supply situation from the market.
- There is yet to be any meaningful disclosure from owners of gas fired plant regarding known changes in their fuel supply situation.

Significant change in electricity contracting position:

The deployment and outage schedule of Genesis' Huntly rankine units coupled with a corresponding drop in generation by Meridian suggests strongly that the "swaption" contract between the two parties was activated in late September, with a start on approximately 7 October. If so, this would represent a significant change in electricity contracting positions between both parties. It would also have had material repercussions for spot values, with very high prices and a strong locational adjustment as Meridian curtailed its South Island generation from 7 October.

The triggering of the swaption presents a material change in electricity contracting positions. Once the swaption is in effect, Meridian and Genesis both have very different short-term contract positions that materially affect spot prices. If this assumption regarding the activation of the swaption is correct, then it should have been disclosed to the market at the time it was called. In addition, this being the case, then when the swaption is called off this should also be disclosed to the market as soon as practicable.

AND describe why in your view the claimed UTS could not be satisfactorily resolved by any other mechanism available under the Code.

1. Within the Code there are no provisions that regulate market maker obligations or require generators to ensure the availability of contracts that enable purchasers to manage wholesale market price risk.
2. Within the Code there are no provisions that directly address the susceptibility of purchasers to generator pricing power causing sustained high prices that threaten financial viability and orderly trading. Other electricity markets have specific rules to address sustained high (but not extreme) prices. The Undesirable Trading Situation is applicable in this event since it must be considered an important component of the 'market safety net' that should protect purchasers (and ultimately end consumers) against generator pricing power.

SOLUTION SOUGHT BY APPLICANT

Clause 5.2 of the Code

Describe how in your view the claimed UTS could be resolved by the Authority, bearing in mind that clause 5.2 of the Code enables the Authority to take one or more of the following actions, should it find that a UTS does exist (please refer to the full text of clause 5.2 of the Code on the following page for more information):

- directing that an activity be suspended, limited or stopped, either generally or for a specified period:
- directing that completion of trades be deferred for a specified period:
- directing that any trades be closed out or settled at a specified price:
- directing a participant to take any actions that will, in the Authority's opinion, correct or assist in overcoming the UTS.

---

1. **Direct** participants to comply with their disclosure obligations. This must include requiring immediate clarification of gas supplies. This will improve transparency in the market.

2. **Reset** market prices to levels which could be expected absent the exercise of excessive market power from the 15th of September until the spread of the ASX futures is less than 5% for 5 business days. This will address the lack of competitive tension/pricing power through this period. It will also reduce the prudential burden.

3. **Direct** the System Operator to provide updates on all fuel supplies as part of its regular reporting, and to develop an 'all fuels' market risk curve. This will improve transparency.

4. **Take** such further actions as are necessary to correct the undesirable trading situation and restore normal operation of the market as soon as possible.

In addition to these immediate measures under clause 5.2 of the Code, the claimants request that the Authority:

5. **Amend** the Code to require compulsory market making obligations for all Generators with 10% or greater share of the transmission-connected generation market. This will address the lack of liquidity in the contracts market and will restore its integrity.

6. **Amend** the Code to create an automatic price cap if there is a *force majeure* event affecting the operation of significant generation. This will ensure purchasers don't bear the cost of events that impact competition within the market that are outside their control.

7. **Amend** the Code to allow generators to be compensated for operating during *force majeure* or market stress events if doing so would result in operating losses, i.e., this should ensure that generators are not faced with the prospect of operating at a loss when an automatic price cap is applied, which would create a disincentive for them to supply energy.

8. **Amend** the Code to create an automatic price cap if there is likely to be a sustained market stress event based on 'stress test' scenarios. This will ensure that purchasers are not exposed to events that make it financially unviable for prudent operators.

9. **Confirm** if the Electricity Authority will investigate potential oligopoly behaviour and market manipulation or whether concerns should be directed to the Commerce Commission and/or Financial Markets Authority.

Please send the completed form to uts@ea.govt.nz

Clause 5.2 of the Code - Actions Authority may take to correct undesirable trading situation

(1) If the **Authority** finds that an **undesirable trading situation** is developing or has developed, it may take any action that—

(a) the **Authority** considers is necessary to correct the **undesirable trading situation**; and

(b) relates to an aspect of the **electricity** industry that the **Authority** could regulate in this Code under section 32 of the **Act**.

(2) The actions that the **Authority** may take under subclause (1) include any 1 or more of the following:

(a) directing that an activity be suspended, limited or stopped, either generally or for a specified period:

(b) directing that completion of trades be deferred for a specified period:

(c) directing that any trades be closed out or settled at a specified price:

(d) directing a **participant** to take any actions that will, in the **Authority's** opinion, correct or assist in overcoming the **undesirable trading situation**.

(2A) A direction given to a **participant** under subclause (2)(d)—

(a) may be inconsistent with this Code; but

(b) must not be inconsistent with the **Act**, or any other law.

(3) The **participant** must comply promptly with a direction given to it in writing.

(4) A **participant** is not liable to any other **participant** in relation to the taking of an action, or an omission, that is reasonably necessary for compliance with an **Authority** direction under this clause.

(5) A **participant** does not breach this Code if it acts in accordance with a direction given under subclause (2)(d).

Appendix B Request for clarification and response

Hi all,

We have some initial questions about some of the information in the UTS claim. Can you please coordinate a response to the following questions (references are to pages in the UTS claim):

1. Please explain why the issues you have identified are unable to be resolved by way of a) enforcement of the existing Code by the Authority, or b) an amendment to the existing Code
2. You allege 'coordinated use of market power' (pages 5, 9, and 10). Do you mean conduct that would be unlawful under the Commerce Act? Or some other standard?
3. You refer to 'significant unutilised reserves' on page 6. Can you please explain what you mean by that phrase.
4. You state that prices are atypical given supply conditions (page 5). Can you please explain this in further detail.

If you have any clarifying questions, please contact Michelle (cc'd) in the first instance.

Kind regards
Rory

Rory Blundell
General Manager Market Performance
Electricity Authority
PO Box 10041
WELLINGTON 6143

19 November 2018 (by email)

UTS CLAIM

1. This is a co-ordinated response to your questions as requested by email dated 9 November 2018, on behalf of all five claimants.

2. To avoid any confusion regarding the elements of the claim and so as to ensure that the responses appropriately relate to those elements, we set out a summary of the claim and applicable principles first, followed by sections dealing with each response.

THE CLAIM

3. The claim sets out a number of bases for declaring a UTS:

   (a) By virtue of the co-ordinated exercise of market power (pages 5 - 9 of the complaint) (ie, tacit collusion, which is expanded further below in response to your question 2).

   (b) The prospect of one of the Authority's stress test scenarios being breached also constitutes a UTS (pages 9 – 10 of the complaint).

   (c) Contracts market failures (pages 11 – 14 of the complaint).

   (d) Lack of transparency due to failures to disclose information (pages 14 – 17).

   (e) A confluence of all these factors (pages 4 – 5 of the complaint).

4. In respect of each item above individually (and, therefore, necessarily in respect of item (e) collectively), both parts (a) and (b) of the definition of a UTS are established. In respect of items (a), (c) and (d), clause 5.1(2)(a) of the Code also applies, and in respect of items (a) (b), (c) and (d), clauses 5.1(2)(e) and (f) apply as well.

LEGAL PRINCIPLES

5. In the High Court decision regarding a UTS in 2011 involving Genesis ([2012] NZHV 238), the Court endorsed (at [96]) the Authority's position that:

(a) s15 of the Act provided the economic context for interpretation of a UTS and that "the economic rationale of UTS provisions is to achieve operationally efficient and competitive markets" (at [67] to [69]);

(b) UTS provisions are adopted by market providers because they cannot foresee all future eventualities and hence cater for these in the market's rules and some practices are particularly difficult to specify in the rules and so are better covered by generic-type UTS provisions (at [90]);

(c) the inference from clause 5.5 of the Code is that a UTS could not constitute the "normal operation" of the market ([88]);

(d) "orderly" has a wider meaning that just completion of trades and includes that all market participants would be trading on a "level playing field" ([97]), not with an "imbalance of knowledge about the market" ([98]), and that "market traders be equally well informed of market conditions" ([99]), and [101] to [102], [212];

6. The Court also:

(a) rejected arguments that UTS provisions were not an appropriate remedy on the basis asserted that what was sought by the claimants was a rule change, and that amendments to the Code could avoid the issue in future ([118(d)], [177]).

The Court said that the Authority must decide whether a UTS exists based on the situation presented, it may not be the case that a rule change was justified, that amendments for the future would not have any effect on that situation and that uncertain amendments in future would not solve a repeat of the situation unless and until amendments were passed ([271], [274], [275]). The Authority is correct to (and is required to) focus on the definition of UTS and the situation presented, and is entitled to conclude that protection of trading in the meantime was required to ensure market confidence;

(b) rejected arguments that "contingency or event" must constitute a single circumstance, and held that the "words can include a combination of factors and typically will do so" ([119]), that there can be a "variety of circumstances" ([121]) or a "set of circumstances" ([123]).

The decision of the authority, and upheld by the Court, was "based on a combination of circumstances giving rise to the UTS. Each factor considered alone might be within an "ordinary market"…[197] and "the appellants' analysis considers each issue in isolation from others [198]…but [t]he Authority's approach was, correctly, to consider all in combination and decide

if the combination of circumstances met the definition of a UTS" [199]. "[A] series of events, some events part of a normal market operation…could in combination be a contingency or event which is a UTS" [256].

Since, and because of, that decision, this point has been made abundantly clear by deleting references to "contingency or event" and referring in the definition now to a "situation"

(c) all of the circumstances described in the examples of a UTS (hitherto within the definition, but now contained in clause 5.1(2), including the question of public interest, can legitimately be used in interpretation of the two limbs ((a) and (b)) of the definition ([141]);

(d) exceptional circumstances do not have to exist before a UTS can be declared, but relevantly to a claim is an analysis which shows that the situation is "out of the ordinary or beyond normal trading" ([172]);

(e) based on the objectives in s15 of the Act, "a competitively and efficiently operated wholesale market [is] in the public interest" ([283]), the "wholesale market" is defined to mean the spot market and the hedge market, but it is also "simply not possible to break up the market for supply of electricity between wholesale and retail…[n]either can function without the other. The retail electricity market is inevitably affected by what happens at a wholesale level…[which] suggests that threats to the public interest, which inevitably would include the retail market for electricity can properly inform the Authority's assessment in clause (a) of the definition" ([291])

QUESTIONS OF 9 NOVEMBER

7. Your questions are dealt with under the headings below.

1 Resolution by enforcement of other provisions or by amendment of Code?

8. There is not, as far as we are aware, other provisions of the Code that can be enforced in the situation. If there were, we would expect the Authority to do just that.

9. Nor, as the High Court decision in Genesis shows, should the question whether a UTS can be resolved by amendments to the Code be a consideration. We have suggested, in respect of solutions sought, that for the future the Authority should make certain amendments, but they are in no way intended to be taken as a solution to the current situation and the UTS that has occurred.

2 Commerce Act

10. While the Commerce Act could also be breached by the tacit collusion alleged, that is not a necessary condition for determining that conduct exists for the purpose of declaring a UTS.

11. Reference to 'coordinated use of market power' should not be interpreted as the applicants alleging a breach of section 27 of the Commerce Act (reflecting the considerable legal challenges and standards in that jurisdiction when bringing such an action – something that the Authority need not, and should not, be concerned about when assessing whether a UTS has occurred). Whether or not there has been a breach is a matter for that Act and for the Commerce Commission, and the Claim does not invoke clause 5.1(2)(d) of the Code ("material breach of any law").

12. It is not necessary for firms to communicate explicitly in order for them to know what to do in certain situations in order to maximise their joint profitability, i.e., to tacitly coordinate their conduct. There is perhaps no better example of a market with tailor-made conditions for such implicit coordination than an energy-only wholesale electricity market. For example, there is:

    (a) high seller concentration, leaving fewer businesses whose activities need to be coordinated and monitored;

    (b) high barriers to entry and expansion, which provide enhanced scope for profitable price increases without a commensurate threat of entry;

    (c) market transparency whereby price information is widely and readily publicly available such that prices can be easily monitored;

    (d) price inelastic demand, which allows firms to increase prices without a substantial fall-off in demand;

    (e) almost no product differentiation where competition is mainly on price, allowing firms to settle more easily upon the appropriate price level without having to deal with variations in quality;[1]

---

[1] Also, Wolak, F., (2005), "*Managing Unilateral Market Power in Electricity*", World Bank Policy Research Working Paper 3691, September 2005, page 4 and Similarly, Twomey, P., R. Green, K. Neuhoff and D. Newbery, (2005), "*A Review of the Monitoring of Market Power*", Cambridge Working Papers in Economics CWPE 0504, page 54: "*There are sound theoretical reasons (and supporting evidence) for suspecting that electricity*

13. Specifically in the current situation, market power is co-ordinated through means which include but are not limited to:

    (a) changes to bid offer stacks are not a prerequisite given the stacks can be constructed to maximise power in the market when it arises;

    (b) withholding volume either physically or economically through bid prices when at no time was there less than 40% hydro;

    (c) all generators knowing each others bid stacks from the previous day

    (d) all generators receiving the highest offer price. All profiting from a higher spot price even at the expense of some volume

14. It follows that when supply constraints the likes of which we have been and are seeing at the moment emerge, this provides an opportunity for a large gentailer to strategically increase its offers, safe in the knowledge that others will follow suit (and knowing that it will be in a position to react swiftly if they do not). This mutually reinforcing conduct can then drive up spot prices *well above* the levels justified by the supply constraints – but those constraints can nonetheless be used as a convenient excuse to rationalise those increases.

15. This outcome can be achieved without exchanging any phone calls, emails or memoranda. The businesses in question have set prices and quantities thousands upon thousands of times, and through those repeated interactions, know what to look for and how to respond in certain situations.

16. While the distinction between explicit and implicit coordination may be an important practical consideration to a court when adjudicating on a section 27 matter, it is immaterial to the Authority in this context. All the Authority needs to examine is whether the prices have exceeded what is reasonable given the prevailing supply conditions, thereby undermining the confidence in and the integrity of the spot market.

3 Significant Unutilised Reserves

17. The statement "significant unutilised reserves and there have been no security events" is an observation of the lack of threat to security of supply. Indeed during the period there were no Warning Notices (WRN) or Grid Emergency Notices (GEN).

---

markets may be unusually susceptible at times to the exercise of market power, compared to other markets."

18. The Authority has access to all the relevant information to assess security of supply including reserves availability and the System Operator security notices.

4 Atypical prices, supply conditions

19. The Authority has access to all the relevant information. The material we have already provided to indicate atypical prices and supply conditions [Pages 5-9], is enough to justify the Authority conducting further investigation.

20. If there is anything further we can help the Authority with, please let us know. We trust, however, that in light of the Claim, the applicable legal principles and our responses in this letter, the authority will now investigate and declare a UTS.

Yours Faithfully,

Luke Blincoe
Chief Executive
Electric Kiwi Limited

Glossary of abbreviations and terms

A detailed glossary is available at www.ea.govt.nz/glossary

Act	Electricity Industry Act 2010
ASX	Australian Securities Exchange
ASIC	Australian Securities and Investments Commission
Authority	Electricity Authority
CCGT	Combined-cycle gas turbine
Code	Electricity Industry Participation Code 2010
e3p	Energy Efficiency Enhancement Project (Huntly Unit 5) owned by Genesis
EMI	Electricity Market Information, a website maintained by the Authority
FP	Final price
GJ	Gigajoule
GW	Gigawatt
GWh	Gigawatt hour
HHI	Herfindahl-Hirschman Index
MW	Megawatt
MWh	Megawatt hour
NRS	Non-responsive schedule
POCP	Planned outage co-ordination process, a website maintained by Transpower for planned plant outage information
PRS	Price responsive schedule
TP	Trading period
UTS	Undesirable trading situation
Whirinaki	A diesel generator in the Hawke's Bay owned by Contact