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Submissions

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To Whom It May Concern

**Consultation Paper - Draft decision regarding alleged UTS on 26 March 2011**

Thank you for the opportunity to make a submission in response to the Consultation Paper and Draft Decision of the Electricity Authority (EA) regarding the alleged Undesirable Trading Situation (UTS) on 26 March 2011.

We support the finding of the EA that this was a UTS. We note the extensive analysis underpinning the draft decision but we are concerned that because the incidence of UTSs has been very rare, this decision will be precedent setting and will guide future market behaviour and outcomes. For that reason there are a number of aspects that we think would improve the quality of the EA's decision from the perspectives of:

1. upholding confidence in the electricity market. There seems to be no mechanism in the electricity market Code that would empower the EA to impose penalties on market participants for their participation in a UTS, nor to send signals to market participants about the required standard of behaviour. As such we submit that the EA should urgently make modifications to the Code to provide the EA with punitive

powers, and incorporate this intent into the decision so that it sends signals that participants in a UTS will face punitive measures.

2. removing the "squeeze". Having established that a party did squeeze the market it is incongruous that the offers of that party during the period are not adjusted to "remove the squeeze" by adjusting its offers to "pre-squeeze" levels. The effect of the draft decision is to condone the squeeze.

3. protecting the integrity of the price discovery process. This submission identifies that an informed market:

- **may** have led to higher supply side contributions to the area electrically north of the constraint (from TCC in particular);
- **would** have led to significant demand side response in the constrained area at prices significantly below those proposed by the EA (reflecting the industrialised nature of demand in the greater Auckland area).

Both of factors 2 and 3 above are important in setting precedents for how prices should be reset following a UTS to reflect a fully informed market and to remove the squeeze effects of the offending party.

Our detailed response is attached and includes:

- answers to the four questions requested in the Consultation Paper in the format specified, attached as Appendix A; and
- additional expert evidence provided by Kieran Murray, Toby Stevenson and Sally Wyatt of Sapere that comments on the Draft Decision.

None of this information is confidential.

Please do not hesitate to contact either myself or Fraser Whineray, GM Operations, should further clarification be required.

Yours sincerely

A handwritten signature in black ink, appearing to read 'D Heffernan', followed by a long horizontal line extending to the right.

Doug Heffernan

Chief Executive

## Appendix A: Responses to questions in consultation paper

Question No	General Comments in regards to the question	Response
<p>1. Has the Authority accurately recorded and interpreted all of the salient facts in regard to this matter? If not, please detail the inaccuracies.</p>		<p>The EA has accurately recorded the facts we have submitted. We agree with most of the findings on the causes of the UTS and most of the proposed remedial actions. We believe there are additional matters that support the determination of a UTS, which have the added benefit of providing the predictability that an orderly market requires. These additional matters may also have consequences on the appropriate remedial actions.</p> <p>The draft decision, whilst dealing specifically with the events of 26 March, could also usefully incorporate some provisions that address the future orderly operation of the market. The expected behaviour of participants and also the disincentives on undesirable trading must be made very clear.</p> <p>This is important for all participants, investors, customers, retailers, the grid owner and operator and generators. It is also important for existing and developing hedge, demand side and derivative markets that the underlying wholesale market operates effectively and predictably.</p>
<p>2. Do you agree with the Authority's draft decision that the situation existing on 26 March 2011 constitutes a UTS? Please give reasons for your answer.</p>		<p>We agree with the EA that the situation which arose on 26 March constitutes a UTS.</p> <p>As earlier noted, we agree with most of the findings on the causes of the UTS, though we have some additional suggestions for the interpretation and remedial action sections that would support the future operation of the market.</p> <p>Participant Responsibility</p> <p>All participants should have a responsibility for ensuring a functioning, orderly and credible market. This responsibility includes not undertaking activities that could result in undesirable trading. The</p>

Question No	General Comments in regards to the question	Response
		<p>draft decision should be clear that undesirable trading must be proactively avoided by participants, even if it unintentionally occurs.</p> <p>With respect to the events of 26 March, the EA found that the market was squeezed and that this was undesirable. Putting to one side compounding factors, the materially modified Huntly offering behaviour at 9:51am on 25 March (both quantity and price) specifically targeted the period of the transmission outage leading to significant advantage to Genesis in a net pivotal position and with undesirable impacts on the market as a whole. Despite having the opportunity to do so, Genesis took no steps leading up to and/or during the 7 hour constraint period to act in an appropriate manner to avoid the squeeze and the undesirable trading associated with it. In our view it is incumbent on 'experienced' trading houses to be attuned to, and respond to, undesirable trading in the interests of the market. We believe that the decision would be enhanced if this was made explicit. As detailed in "code shortfall" below we submit that Code changes should be made to include penalties on parties undertaking undesirable behaviour.</p> <p>Manipulation</p> <p>The EA found there were compounding factors in the circumstances surrounding the UTS, namely the demand forecast and TCC's withdrawal from the market. In its draft decision, the EA found that the party undertaking the squeeze did not act in a manipulative manner. The compounding factors may mean that it is perhaps more difficult to prove the components that constitute manipulation. However, if the compounding factors had not existed on 26 March and yet similar outcomes had arisen, in our view the assessment would be that manipulation was a cause of the UTS. In that situation, other than finding there had been a UTS and resetting prices, there would have been no penalty in the Code enforceable on the party causing the UTS.</p>

Question No	General Comments in regards to the question	Response
	<p>Predictability</p> <p>If sufficient and timely information is made available to enable parties to consider responses to the potential for high spot prices at a future date, the parties need to be able to rely on the predictability of offer behaviour around any specific transmission constraint. Materially modifying offer behaviour to take advantage of a net pivotal position is undesirable. We believe the decision would be enhanced if this was explicit.</p> <p>Use of Net Pivotal Wholesale Market Position to Leverage Derivatives Markets</p> <p>Where market participants endeavour to mitigate market risk through a supply hedge with the one generator that is likely to be net pivotal because of a transmission outage, and that net pivotal participant knows that it can set wholesale prices at arbitrarily high levels through modification of its offer behaviour, then that participant can effectively dictate the hedge terms. This situation was evident during the outage when Meridian sought cover from Genesis and none was offered. Subsequently, cover was offered at \$10,000/MWh for a specific evening period. We believe that the leverage into the hedge market of a net pivotal position arising in the wholesale market is undesirable. We note that hedges are not part of the electricity market rules and therefore not covered by the UTS provisions. To avoid the leverage described above we believe the following should be explicit in the decision:</p> <ol style="list-style-type: none"> <li>1. Timely and relevant information must be given to the market in order to encourage the maximum range of competitive responses to risk mitigation, including demand side participation (both bona fide participation and through adequate prior notice to curtail demand) and demand/supply side hedges; and</li> </ol>	

Question No	General Comments in regards to the question	Response
	<p>2. Market participants must be able to rely on predictable offer behaviour inside a transmission constraint period that is consistent with offer behaviour outside the constraint under similar conditions. This should be considered in paragraph 152 (we expand on this point in the response to Question 3 below).</p> <p>Misleading and Deceptive</p> <p>With respect to the allegation of trading that is misleading or deceptive, or is likely to mislead or deceive, we believe that the EA has focused on whether or not anyone was <u>actually</u> misled or deceived, as opposed to the <u>likelihood</u> that any participant might be misled or deceived. We believe that the decision would benefit from a stronger analysis of the <u>likelihood</u> aspect.</p> <p>Code Shortfall</p> <p>We note that the current UTS remedies lack the ability for punitive measures against the party responsible for the undesirable trading, even if the behaviour was shown to be manipulative, likely to mislead, deceptive etc. The UTS remedies available to the EA need to include the ability to provide appropriate disincentives for undesirable trading. This may require changes to the UTS provisions in the Code and we would recommend that this matter be addressed either separately or as part of the EA's current review of market performance.</p> <p>Other Comments</p> <p>Furthermore, we consider that the final decision:</p> <ul style="list-style-type: none"> <li>• would materially benefit from a clear explanation of why Genesis sought to change the way it covered its net position during the outage by increasing production at Tokaanu rather than simply maintaining production from the modern and low-cost e3p plant (where production was</li> </ul>	

Question No	General Comments in regards to the question	Response
		<p>reduced). It is noted that during the period Genesis was in a net pivotal position, prices were set at ca \$20,000/MWh by e3p for a sustained period, not from the older and higher cost Huntly Units 1-4 (three of which were not offered and the fourth of which ran at a relatively constant 100MW throughout the period of the transmission constraint).</p> <ul style="list-style-type: none"> <li>• should not comment on compliance with the law other than to consider a complaint that a Participant may have breached the Code (Part 3). In particular, comments on Section 36 of the Commerce Act should be excluded from the decision. Section 36 matters fall into the jurisdiction of the Commerce Commission. The ability to pursue redress through Section 36 (outside of the EA) provides a powerful market dynamic regarding potential anti-competitive behaviour that is beyond the scope of an EA UTS decision and remedy. This renders a participant causing a UTS with possible exposure to a material net downside position.</li> <li>• appropriately states that high prices, by themselves, do not constitute a UTS, though would benefit from the additional statement that low prices do not, by themselves, mean that an event is not a UTS</li> </ul>
<p>3. Do you agree with the draft remedial actions that the Authority intends to take to correct the UTS? Please give reasons for your answer.</p>	<p>We agree in part with the draft remedial actions that the EA intends to take to correct the UTS. As noted above, it is critical that predictability is clear for the New Zealand electricity market to maintain confidence for investors, consumers and the economy. In this regard:</p> <ol style="list-style-type: none"> <li>1. In paragraph 151 of the draft decision the EA notes that the UTS occurred as a result of a squeeze and that the remedy to be applied by the EA should be designed to correct the prices that manifest as a result of the squeeze. We agree with this, and believe the logical remedy should be to 'remove the squeeze'.</li> </ol>	

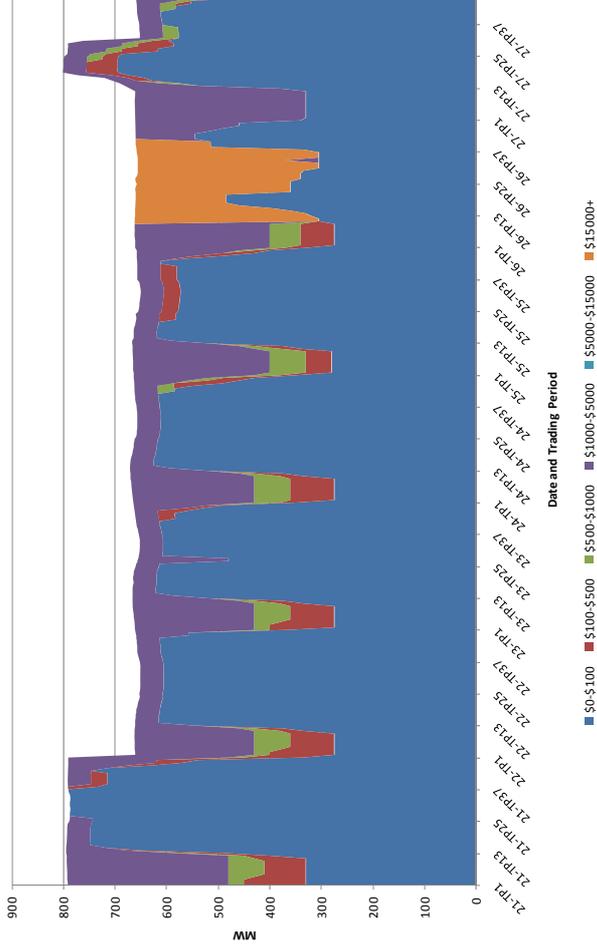
Question No	General Comments in regards to the question	Response
		<p>2. The proposed remedial action in the draft decision does not seek to remove the squeeze. Counter-intuitively, it potentially condones the squeeze (at least partially) by providing alternative pricing at which a theoretical LPMC generator would have offered (to provide a floor) and theoretical demand curtailment that would have occurred (to provide a cap).</p> <p>a. With respect to the floor, the theoretical LPMC generator contemplated in the draft decision is not available to market participants for future hedging in reality, particularly in the near term. Whilst the approach in the draft decision assists with the events of 26 March, it does not assist with an orderly market going forward, where the market cannot rely on this theoretical LPMC generator to participate in the wholesale market and/or provide hedges.</p> <p>As it stands, the remedial action in the draft decision condones a squeeze to between \$1500 and \$3000/MWh. This has the potential to markedly and negatively (from an orderly market perspective) influence behaviour during future transmission events where one party is net pivotal. If the squeeze is undesirable, all aspects (rather than just selected components) of that offer behaviour are inappropriate and should be reversed. It would then follow that the offers at Huntly should also be restored to an offer structure that does not exhibit the squeeze behaviour.</p> <p>The figure below illustrates offer pricing in the week leading up to the event and therefore provides guidance as to what those pre-squeeze offers should be.</p>

Question No

General Comments in regards to the question

Response

**Genesis Generation Offers - North of constraint**



Additionally, we believe that paragraph 152 should also include reference to sellers as well as buyers. Contact's response with respect to TCC is potentially relevant to the remedy in this instance. Paragraph 122 states that Contact, when it withdrew 425MW of energy offered at Stratford, believed that prices were likely to be low for 26 March and that it would not be economic to run TCC. Had Contact known of the expected high prices, it would be logical to suppose that it may have changed its decision and offered TCC. This is consistent with the concept noted in the draft decision that purchasers would have made different decisions with regard to hedging and consumption had they known about the potential for those high prices.

b. With respect to the cap (demand curtailment estimation), we believe that significant

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		<p>improvements should be made to the process for establishing the estimates of the prices at which customers would curtail demand by:</p> <ul style="list-style-type: none"> <li>i. considering alternatives to the Upper South Island data given that the demand profile and customer mix is substantially different in the Upper North Island (particularly north of the constraint on 26 March) and therefore this data set is inappropriate. In Zone 1, there are significant industries including steel, cement and recycled paper which have historically documented substantially lower prices for demand response. We note that in its 2009 investigation, the Electricity Commission found that the price threshold at which consumption would be cut varies, though is largely within the range of \$100-\$300/MWh.</li> <li>ii. considering a pricing range rather than a single price point, given this is how demand curtailment would work in reality.</li> </ul> <p>3. In summary, we believe that in determining final prices for the relevant trading periods on 26 March the EA should at least address:</p> <ul style="list-style-type: none"> <li>a. Supply Side: a reset of Huntly's price offers to exclude the squeeze behaviour.</li> <li>b. Demand Side: alternative assessments on demand side behaviour with an emphasis on the nature of the industries included in the constrained area.</li> </ul> <p>We acknowledge that it is very important for appropriate wholesale price volatility under competitive market conditions to drive the signals for deeper demand side participation and for peaking plant. The remedial actions we are suggesting are consistent with this.</p>
4. Are there any other remedial actions that the	Further to the remedial actions proposed in the draft decision, and in conjunction with the	

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<p>Authority should take to correct the UTS? If so, please detail the other actions and give reasons for your answer.</p>	<p>comments made in response to question 3, we submit that the following actions would be advantageous for the long-term benefit of the electricity market:</p> <ol style="list-style-type: none"> <li>The UTS provisions should be amended as a matter of urgency to include explicit power for the EA not only to reset prices but also to take other remedial actions including, but not limited to, fining participants found to have caused a UTS. We believe that this can be satisfactorily dealt with outside of and subsequent to the UTS investigation and doing so with expediency would support the objectives of an orderly market.</li> <li>Whilst it is important to reset prices based on a strong logic that deals with the event and also helps inform the market, we note that some market participants on the supply and demand side may be unduly penalised as a result of the UTS decision because of either forced generation reduction or rational demand side decisions made during the event. We have no specific remedy though suggest that the EA consider how this can be addressed without impacting the primary UTS remedy of resetting final prices.</li> <li>Demand side participation is an essential development for the market and must be progressed by participants and the regulator without delay.</li> <li>To assist with demand side participation, a more readily understandable and public transmission outage schedule for the benefit of non-gentailers would support decision making.</li> </ol> <p>Items 1, 3 and 4 above should also be prioritised (relative to other EA market initiatives) given the materiality of this UTS situation and the need for a high level of immediate confidence in the robustness of the wholesale market. A strong wholesale market is a foundation to most other</p>	<p>1. The UTS provisions should be amended as a matter of urgency to include explicit power for the EA not only to reset prices but also to take other remedial actions including, but not limited to, fining participants found to have caused a UTS. We believe that this can be satisfactorily dealt with outside of and subsequent to the UTS investigation and doing so with expediency would support the objectives of an orderly market.</p> <p>2. Whilst it is important to reset prices based on a strong logic that deals with the event and also helps inform the market, we note that some market participants on the supply and demand side may be unduly penalised as a result of the UTS decision because of either forced generation reduction or rational demand side decisions made during the event. We have no specific remedy though suggest that the EA consider how this can be addressed without impacting the primary UTS remedy of resetting final prices.</p> <p>3. Demand side participation is an essential development for the market and must be progressed by participants and the regulator without delay.</p> <p>4. To assist with demand side participation, a more readily understandable and public transmission outage schedule for the benefit of non-gentailers would support decision making.</p> <p>Items 1, 3 and 4 above should also be prioritised (relative to other EA market initiatives) given the materiality of this UTS situation and the need for a high level of immediate confidence in the robustness of the wholesale market. A strong wholesale market is a foundation to most other</p>

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	market development workstreams.	

## Appendix B: Expert Submission from Sapere

# Comments on draft decision of the Electricity Authority: alleged UTS on 26 March 2011

Kieran Murray, Toby Stevenson, Sally Wyatt  
13 May 2011



## About Sapere Research Group Limited

Sapere Research Group is one of the largest expert consulting firms in Australasia and a leader in provision of independent economic, forensic accounting and public policy services. Sapere provides independent expert testimony, strategic advisory services, data analytics and other advice to Australasia's private sector corporate clients, major law firms, government agencies, and regulatory bodies.

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## 1 Introduction

Mighty River Power Ltd asked us to provide independent comment on the Consultation Paper: *Draft decision of the Electricity Authority under Part 5 of the Electricity Industry Participation Code regarding an alleged UTS on 26 March 2011* (draft EA decision). We have previously prepared two reports which were submitted to the Electricity Authority (EA) by Mighty River Power. These two reports were:

1. Kieran Murray, Claimed undesirable trading situation 26 March 2011, 6 April 2011 (Kieran Murray, 6 April).
2. Toby Stevenson, Claimed undesirable trading situation 26 March 2011, 6 April 2011 (Toby Stevenson, 6 April).

To avoid repetition, we cross reference these reports as appropriate rather than repeat the analysis contained in those reports.

## 2 Summary

We agree with several key conclusions reached by the EA in its draft decision. We agree with the EA that:

1. “The economic rationale for UTS provisions is to achieve operationally efficient and competitive markets” and because “market providers ... cannot foresee all future eventualities and ... some practices are particularly difficult to specify in the rules ... [these practices] are better covered by generic UTS-type rules.” (draft EA decision, paras 29 – 32; see para 11 to 18 of Kieran Murray 6 April report for reasons).
2. “... Genesis’ application of a squeeze on the wholesale market for electricity resulted in prices at exceptional levels in Hamilton and regions north of Hamilton.” (draft EA decision, para 142; see para 44 of Kieran Murray 6 April report for reasons).

3. “the exceptionally high interim prices on 26 March are the result of a squeeze, which is an undesirable trading practice.” (draft EA decision, para 144; see para 43 to 47 of Kieran Murray 6 April report for reasons).
4. “the remedy ought ... to be directed at restoring prices ... to the level they would have been had buyers ... had the opportunity to arrange an alternative source of supply or to curtail demand.” (draft EA decision, para 152; see paras 17 to 18 of Kieran Murray 6 April report for reasons).

We disagree with the following key conclusions reached by the EA:

1. “The UTS Committee does not consider that there has been a material breach of any law”. (draft EA decision, para 77)
2. “The UTS Committee does not consider that Genesis engaged in conduct in relation to trading that is misleading or deceptive, or likely to mislead or deceive”. (draft EA decision, para 111)
3. “... the cost of an economic alternative that may have placed competitive pressure on the negotiation of hedge cover for a planned transmission outage, should lie between the LRMC of a new entrant peaking generator as a lower bound, and \$3,000/MWh demand response as the upper bound ...”. (draft EA decision, para 166)

There are a number of aspects of the decisions that could have been strengthened, but we consider these three conclusions would result in flawed precedents and therefore are particularly important. As the first major UTS decision by EA, the precedents it establishes will guide future market behaviour and outcomes. We outline our concerns with these aspects of the draft EA decision below.

## **3 No material breach of any law**

### **3.1 Precedent of EA determining breaches of all law**

The EA observes that a material breach of the law could constitute a UTS if it gave rise to an event that is covered by paragraphs (a) and (b) of the definition of a UTS in the Code (draft EA decision, para 76). However, the EA goes further than assessing whether a UTS resulted due to a material breach of the law; it finds that there was not “a material breach of any law.” The statement suggests that the EA considers that neither Genesis nor any other Market Participant:

- Breached section 36 of the Commerce Act.
- Breached section 9 of the Fair Trading Act or any other law.<sup>1</sup>
- Breached the Electricity Industry Participation Code ('the Code').

We think it unwise for the EA to place itself in the position of evaluating whether the actions of market participants did or did not breach statutes that are administered and enforced by other specialist regulatory agencies. While the EA's draft decision appears to reach a conclusion in relation to all law, the EA mentions in particular section 36 of the Commerce Act 1986.

### **3.2 No breach of Section 36 of the Commerce Act**

The EA's draft conclusion that it "does not consider that there has been a material breach of the law" is stated immediately following a brief reference to section 36 matters (draft EA decision, paras 74 to 77).

The EA draft decision does not contain any explicit economic analysis of section 36 issues.<sup>2</sup> Typically, an economic (and legal) analysis of a potential breach of section 36 evaluates whether any market participant had a substantial degree of market power in a relevant market, took advantage of that market power, and did so for the purpose of preventing or deterring a person from engaging in competitive conduct (or other proscribed purposes under section 36).

It should be a concern for all Market Participants were the EA to adopt a practice of opining as to whether a Market Participant's actions were or were not a breach of the Commerce Act. A better course would be for the EA to not take a view on section 36 and leave the matter for the Commerce Commission to determine.

### **3.3 No breach of the Code**

The draft EA decision finds that a "squeeze" is an undesirable trading practice and that Genesis applied a squeeze but did not breach the Code. The implication appears to be that the EA may reset prices after an undesirable trading practice by a

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<sup>1</sup> Section 9 of the Fair Trading Act says "No person shall, in trade, engage in conduct that is misleading or deceptive or is likely to mislead or deceive."

<sup>2</sup> The EA does adopt the net pivotal language and approach from the Frank Wolak report prepared for the Commerce Commission for its 2009 "Investigations Report", but does not elaborate the relevance of the test for competition analysis.

Market Participant, but it is not a breach of the Code for a Market Participant to undertake an undesirable trading practice, even if that undesirable trading practice results in prices that would “threaten to undermine confidence in the wholesale market for electricity, and threaten to damage the integrity and reputation of the wholesale market for electricity” (draft EA decision, para 144).

This aspect of the decision may expose a weakness in the Code. The former NZEM rules placed requirements on Market Participants in terms of trading behaviour, such as observing high standards of trading conduct, observing high standards of integrity and fair dealing, etc. These former provisions were similar to other markets (e.g., the Chicago Board of Trade rules state that it is an offense “to corner, or squeeze, or attempt to corner or squeeze ...”, for the full quote, see para 32 of Kieran Murray 6 April report). However, we cannot see in the Code any provision that prohibits (either explicitly or implicitly) a Participant from participating in undesirable trading practices.

From what we can establish, the Code applies no standard of behaviour on Market Participants in relation to trading. Instead, the onus is on the EA, which has a wide mandate under Part 5 of the Code to “correct” a UTS. The EA, it seems, cannot go beyond correcting an existing UTS. The EA does not appear to have the power to punish Market Participants for creating a UTS, nor to send signals to Market Participants about the required standard of behaviour by way of punitive precedents.

If the Code is to protect the integrity of the price discovery process, then it should, in line with all organised markets, require Market Participants to observe high standards of trading conduct, including potentially prohibiting actions that are known to result in undesirable trading situations (as for example the Chicago Board of Trade does in prohibiting its market participants from squeezing or attempting to squeeze the market). No-one can have confidence in a market in which its Participants can implement with impunity actions that “threaten ... trading on the wholesale market for electricity and that would ... preclude the maintenance or orderly trading or proper settlement of trades” (these are of course the words of the definition of a UTS).

## **4 Conduct that may mislead or deceive**

Organised markets typically place standards of conduct on Market Participants in relation to trading behaviour to maintain the integrity of the market. These standards include prohibitions against misleading statements and also prohibitions

against trading actions that may mislead or deceive. These prohibitions typically include actions that might result in a false or misleading expectation of the settlement price.<sup>3</sup>

We disagree with the EA that “*thousands of offers by Genesis of generation plant at \$10,000/MWh since March 2010 could be construed as a fair warning*” (draft EA decision paragraph 108). We fully analysed every offer made in the market in the year to 28 February 2011, including offers made by Genesis “*13,343 offers were made at higher than \$5,000 in the year*” (see para 32, Toby Stevenson, 6 April report). Genesis changed its offers during the period they executed the “*undesirable trading practice of squeezing the market*” (draft EA decision, page 1). Genesis choose to introduce a higher unprecedented offer price, and create a situation where that offer price would clear, creating unprecedented wholesale electricity prices in the market whilst engaging in that undesirable practice.

The EA found that these actions were taken in circumstances where:

*There was limited ability for the high interim price situation to have been forewarned to participants in the wholesale market for electricity* (draft EA decision, para 109); and

*Parties exposed to prices in the wholesale market for electricity in those regions had good reason to believe the exceptionally high offer process at Huntly for those trading periods would not translate into market prices* (draft EA decision, page 2).

Given the findings by the EA, we suggest there are two useful courses of action it could pursue:

1. Firstly, it should clarify what might be meant by misleading or deceptive behaviour within the rules. The pattern of pre dispatch schedules indicating likely dispatch and likely prices relies on participation by Market Participants. It allows Participants to prepare themselves for the most likely outcomes at the point of dispatch. In this case, Genesis was able to surprise the market and the EA’s interpretation is that the level of surprise is acceptable. It would be useful for the EA to provide some guidance on what they think is not acceptable or misleading.
2. Secondly, the EA should take steps to provide broader and timely dissemination of wholesale prices or, more precisely, notification that prices

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<sup>3</sup> See for example Part 5.7, ASIC Market Integrity Rules (ASX Market) 2010.

have reached a level of interest. Notification could be by way of txt or email or web based applications. Users could set the levels that would trigger the notification. This could be an extension of the current information system and wouldn't require a code change or System Operator approval in the way that demand side orientated market mechanisms do. It could be made available to participants or non-participants; that is, anyone interested in spot price behaviour.

## 5 Cost of an economic alternative

### 5.1 Price reset

The EA concludes at paragraph 152 that:

*The design of the remedy ought therefore to be directed at restoring prices in the wholesale market for electricity to the level they would have been had buyers been aware that Genesis would be net pivotal on 26 March 2011 and those buyers had had the opportunity to arrange an alternative source of supply or to curtail demand.*

The approach to the remedy seems to be the same as proposed in paragraphs 17 and 18 of Kieran Murray 6 April report. In that report, we referred to the economic test of interpreting standards as:

*Impute terms to the contract that the parties would have agreed to if they had bargained over all the relevant risks (Robert Cooter, cite, para 17, Kieran Murray 6 April report)*

*... a process of figuring out what measures the parties would agree to, if transaction costs weren't prohibitive. (Richard Posner, cite, para 18, Kieran Murray 6 April report).*

However, the EA has not applied its own proposed approach to remedy the UTS; it has not attempted to figure out what would have been agreed if the parties had bargained over all the relevant risks. Rather, it asserts that the LRMC of a new entrant peaking generator should set a floor price, and demand response schemes for grid support in the upper South Island should set a price cap. Neither of these propositions reflect the relevant risks or indeed the EA's own analysis.

At paragraph 83, the EA observes that:

*Had Contact Energy's offers remained in place, a simulation [undertaken by the EA]... indicates that North Island prices on 26 March 2011 would have been*

*unexceptional, as sufficient transmission capacity existed between Stratford and Huntly to remove the need for dispatch of Huntly at exceptionally high prices. (draft EA decision, para 83)*

The EA reports that Contact explained that it withdrew 425MW because: “The expectation at the time was that prices were likely to be low for 26 March and that it would not be economic to run the Taranaki Combined Cycle power station.” (draft EA decision, para 122)

Hence, if buyers had had sufficient time to arrange alternative sources of supply, buyers could be assumed to have tried to induce Contact to offer its Taranaki Combined Cycle power station at a price that ensured it was just profitable. An assumption that Contact Energy would have kept its Taranaki Combined Cycle from operating in the market when it could have done so profitably, is not an assumption supported by the analysis in the draft EA decision.

The “unexceptional” prices that would result from simulating market outcomes with Taranaki Combined Cycle operating profitably (and Genesis’ squeeze unwound) would place an *upper* bound on prices, before considering any demand response. The EA’s proposal that no constrained on compensation would be paid for the relevant period should be retained along with these “unexceptional prices”.

## **5.2 Demand response and the approach to re-determining prices following the UTS**

### **5.2.1 Behavioural responses of purchasers**

The EA’s approach of attempting to work out the LRM of a new entrant peaking generator also ignores the likely behavioural responses of purchasers. In the absence of transaction costs, all purchasers exposed to the spot market, including those exposed as wholesale market buyers and those buying spot through a retailer:

- Would be fully aware of the risks they face.
- Would be fully aware of forecast and 5 minute prices as they were published by the market (or at least by exception for smaller consumers exposed to the spot market).
- Would know how much load they could reduce or how much stand-by generation they could turn on in response to high spot prices, should they occur.
- Would be able to rely on the spot prices posted by the market; and

- Have other common market mechanisms available to form forward price signals and manage risks.

Those conditions were not present in the New Zealand Electricity Market during the squeeze, as demonstrated by the submitters to the UTS. For example, a direct spot market purchaser like NZ Steel is fully aware of its risks and knows exactly what it can do in response to high prices but was still able to get caught:<sup>4</sup>

*The increase in electricity prices was observed by NZS in the early afternoon of 26 March. NZS was able to take some steps to mitigate the potential effects of it, but NZS has limited operational capability to reduce its demand significantly. However, NZS was able to burn additional natural gas in its cogeneration unit, thereby increasing its own on-site generation and reducing its spot purchase requirements. It also had the benefit of a previously contracted hedge, which had not yet expired. However, its electricity procurement personnel were not contacted by Genesis with any special hedging offers for the weekend in question.*

Fletcher Building confirmed how they would respond and that they would have responded had they known what was going on but Fletcher Building's own system, their agent or the market structure has failed them:<sup>5</sup>

*This event cost Golden Bay Cement \$900,000. This cost could have been almost totally eliminated by shutting non-core plant had the business been made aware of the situation. This was easily achievable given market conditions are soft and we are running at only about 60% of capacity.*

These quotes provide some useful intelligence on how an informed demand side purchaser thinks and behaves. Their instinct is not to arrange an "alternative source of supply" which might include buying a financial hedge. They state plainly that if they knew prices were high enough they would curtail demand and/or start up any stand-by generation they had available.

NZ Steel and Fletcher Building earn their money through an activity other than producing and selling electricity, but their purchases are of a scale that they are aware of the risks of the spot market. Some of the submitters to the UTS might not be expected to fully understand the risks or at least they might be reliant on retailers to look out for their interests. ABE's Real Bagels shows they are both aware of the risks and reliant on someone else to provide information; they are also

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<sup>4</sup> Claim of Undesirable Trading Situation by New Zealand Steel Ltd, p 4.

<sup>5</sup> Letter from Mark Binns to the Electricity Authority, 6 April 2011.

clear about what practicable and commercial steps they would take if the information had been available:<sup>6</sup>

*This could ultimately lead to an inability to trade on these days which may result in lost customers and thus lost revenue for ABE'S Real Bagels Ltd. Obviously we may not know which days these are in advance.*

The ASB Bank's submission confirms simply that they were given no information of any sort in advance:<sup>7</sup>

*On Monday March 28th we were contacted by our spot supplier and notified of the event and impact on prices.*

Vodafone is another submitter on the UTS who provided some information that showed they do understand the risks, they are reliant on another party to provide forecast price information and they do know what steps they would take if they were to receive advice that prices might prove to be \$20,000/MWh:<sup>8</sup>

*While we accept that the outage was known of in advance, the level of prices could not have been predicted by Vodafone and is outside of any reasonable forecast based on previous experience.*

*Had we been made aware of the possible significant spike in prices we would have had the opportunity to mitigate this through, for example, taking actions to reduce our usage and/or use our own generation and arranged to have the cellular network powered by battery backup during the time of the price spike.*

*This lack of notification and inability to mitigate our costs creates an environment which deters consumers from assisting the market place by taking spot exposure with the objective of offering demand side management where available.*

These quotes point to some market design issues as well as some issues in relation to the proper course of action for the EA to take in determining the prices that should now be applied on March 26.

The EA proposes to simulate the price purchasers would expect to pay if they bought a hedge to cover the outage. Submissions on the UTS show that that is not an appropriate way to simulate the response of consumer purchasers. These purchasers do not complain that they could not hedge for the outage; they observe

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<sup>6</sup> Claim of Undesirable Trading Situation by ABE's Real Bagels Ltd, page 3.

<sup>7</sup> Claim of Undesirable Trading Situation by ASB Bank Ltd, page 4.

<sup>8</sup> Claim of Undesirable Trading Situation by Vodafone New Zealand Ltd, page 2.

that had they been forewarned of Genesis' squeeze, they would have cut load and/or run back up generation. Had the demand side been placed in a position to respond, the SDS load forecast which the EA found had been understated (draft EA decision, para 104) might well have turned out to be too high.

### **5.2.2 EA appears to lean against demand response mechanisms**

The EA's proposed approach indicates little confidence in demand response or the role of demand response in price discovery or mechanisms to reflect consumer preferences. The EA's position on demand response is set out in a consultation paper discussing its proposed approach to scarcity pricing:<sup>9</sup>

Para 89.

*Ideally, the concerns about price suppression noted earlier would be addressed by ensuring that electricity users could directly participate in spot price determination – as typically occurs in markets for other products. The resulting market price should better reflect users' preferences about the value of continued supply, and eliminate the risk of price suppression (or overshooting). It should also ensure that available supply is allocated to those parties who place the highest value on continued usage.*

Para 90...

*While the level of demand-side participation is likely to grow over time, the inability of most users to directly signal their preferences in supply emergencies is expected to remain for some time. This means that the potential for price suppression will continue.*

The comments cited above are consistent with a preference for solutions or valuations that are orientated towards the supply of electricity, rather than an interactive or responsive demand side. That same bias is reflected in the EA's proposed approach to re-determining prices for March 26, which would simulate the prices the demand side would face if they were to hedge for the period of the outage.

### **5.2.3 Little demand for short-term hedging by purchasers**

There is little provision, and little demand, for short-term hedging in the market. Generator/retailers might trade between themselves for situations such as the outage that occurred on 26 of March. As a generalisation, few industrials enter into short-term bespoke hedges to cover outages; industrial customers tend to rely on managing purchase risk through longer dated hedge positions. Those industrials

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<sup>9</sup> Scarcity Pricing – Proposed Design. Prepared by the Electricity Authority 28 March 2011

that do have a residual spot exposure will run stand-by generation if prices are high enough or turn down load reluctantly in a short-term high price situation. The Electricity Commission confirmed this view through its hedge market survey:<sup>10</sup>

*The price threshold at which consumption will be cut also seems to vary, but is largely within the range of \$100-\$300 per MW/hr. Very few purchasers are willing to cut back on consumption and do so under duress.*

These survey results appear a more comprehensive source than the demand side response figures the EA refers to in the draft EA decision. The figures in the draft EA decision are based on prices offered for industrial and commercial load shedding and standby generation for a grid support contract in 2008 in the upper South Island, which ranged from \$4,000/MWh to \$11,000/MWh. No analytical or quantitative support is presented by the EA for its proposed cap of \$3,000/MWh other than the comment that:

*the Authority is contemplating \$3,000/MWh as the price floor to apply during a rolling outage load shedding, reflecting the lower cost that pre-notified power cuts might be expected to impose on consumers. (draft EA decision, para 165)*

Given the large number of submissions from consumers in the upper North Island, a better approach (than modifying values for a grid support contract in the South Island) would be for the EA to ask:

*What would the reduced load be, or added standby generation be, if all of those parties exposed to spot prices, directly and through retailers, had been notified that \$20,000/MWh prices were possible or actually occurring (and by implication that the price was based on a reliable forecast)?*

The answers might be tempered by a limited understanding of the risks faced by consumers and their ability to actually shut down consumption but the question better reflects the way demand would respond had they known what was happening.

#### **5.2.4 EA's upper and lower bound prices would distort incentives**

The EA's proposed approach to remedying the squeeze can also be assessed by considering the incentives it would create. Under the EA's proposed approach, prices for a Saturday afternoon in Autumn would be reset to between \$1,500/MWh to \$3,000/MWh. These prices would result in "highly inefficient investment signals" as "consumers in the North Island" would face price incentives to "install

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<sup>10</sup> UMR research and Electricity Commission Electricity Hedge Market Issues December 2009

emergency generation to be used at times of exceptionally high prices” (these quotes are from paragraph 136 of the draft EA decision). As the EA observes, “It would be highly inefficient, and contrary to the public interest, if this [inefficiently high prices] were to occur in the presence of existing generation that could otherwise be operated profitably.”

The prices proposed by the EA of between \$1,500/MWh and \$3,000/MWh would be substantially higher (and therefore inefficient and not in the public interest) from prices that would have resulted in the absence of the squeeze and in circumstances where “buyers had had the opportunity to arrange an alternative source of supply or to curtail demand. The prices that would have resulted if all parties “had bargained over all the relevant risks” can be simulated by the EA assuming:

- That existing generation, including Contact Energy’s Taranaki Combined Cycle Plant and Genesis’ e3p, offered into the market at prices just sufficient to operate profitably.
- That demand responded to known prices.

## 6 Conclusions

We disagree with the following key conclusions reached by the EA:

1. “The UTS Committee does not consider that there has been a material breach of any law”. (draft EA decision, para 77)

We feel it would be unwise for the EA to place itself in the position of evaluating whether the actions of market participants did or did not breach statutes that are administered and enforced by other specialist regulatory agencies, in particular the Commerce Commission.

Further, we consider the EA’s analysis may expose a weakness in the Code. Code applies no standard of behaviour on Market Participants in relation to trading. Instead, the onus is on the EA, which has a wide mandate under Part 5 of the Code to “correct” a UTS. The EA it seems cannot go beyond correcting an existing UTS. The EA does not appear to have the power to punish Market Participants for creating a UTS, nor to send signals to Market Participants about the required standard of behaviour by way of punitive precedents.

2. “The UTS Committee does not consider that Genesis engaged in conduct in relation to trading that is misleading or deceptive, or likely to mislead or deceive”. (EA draft decision, para 111)

Genesis choose to introduce an unprecedented offer price, engaged in an undesirable practice to create an unprecedented level of cleared prices and did so in a way that caught the market by surprise. We remain of the view that its actions leading up to the event were misleading or deceptive or likely to mislead or deceive. The EA can provide more guidance for the future by:

- Clarifying what might be meant by misleading or deceptive behaviour within the rules; and
  - Ensuring that anyone, Market Participant or not, has access to wholesale prices or, at the very least, notification that preset price levels have been indicated by market processes.
3. “... the cost of an economic alternative that may have placed competitive pressure on the negotiation of hedge cover for a planned transmission outage, should lie between the LRMC of a new entrant peaking generator as a lower bound, and \$3,000/MWh demand response as the upper bound ...” (draft EA decision, para 166).

The EA has not applied its own proposed approach to remedy the UTS; it has not attempted to figure out what would have been agreed if the parties had bargained over all the relevant risks. The EA’s approach of attempting to work out the LRMC of a new entrant peaking generator also ignores the likely behavioural responses of purchasers.

The prices proposed by the EA of between \$1,500/MWh and \$3,000/MWh would be substantially higher (and therefore inefficient and not in the public interest) from prices that would have resulted in the absence of the squeeze and in circumstances where “buyers had had the opportunity to arrange an alternative source of supply or to curtail demand. The prices that would have resulted if all parties “had bargained over all the relevant risks” can be simulated by the EA assuming:

- That existing generation, including Contact Energy’s Taranaki Combined Cycle Plant and Genesis’ e3p, offered into the market at prices just sufficient to operate profitably.
- That demand responded to known prices.