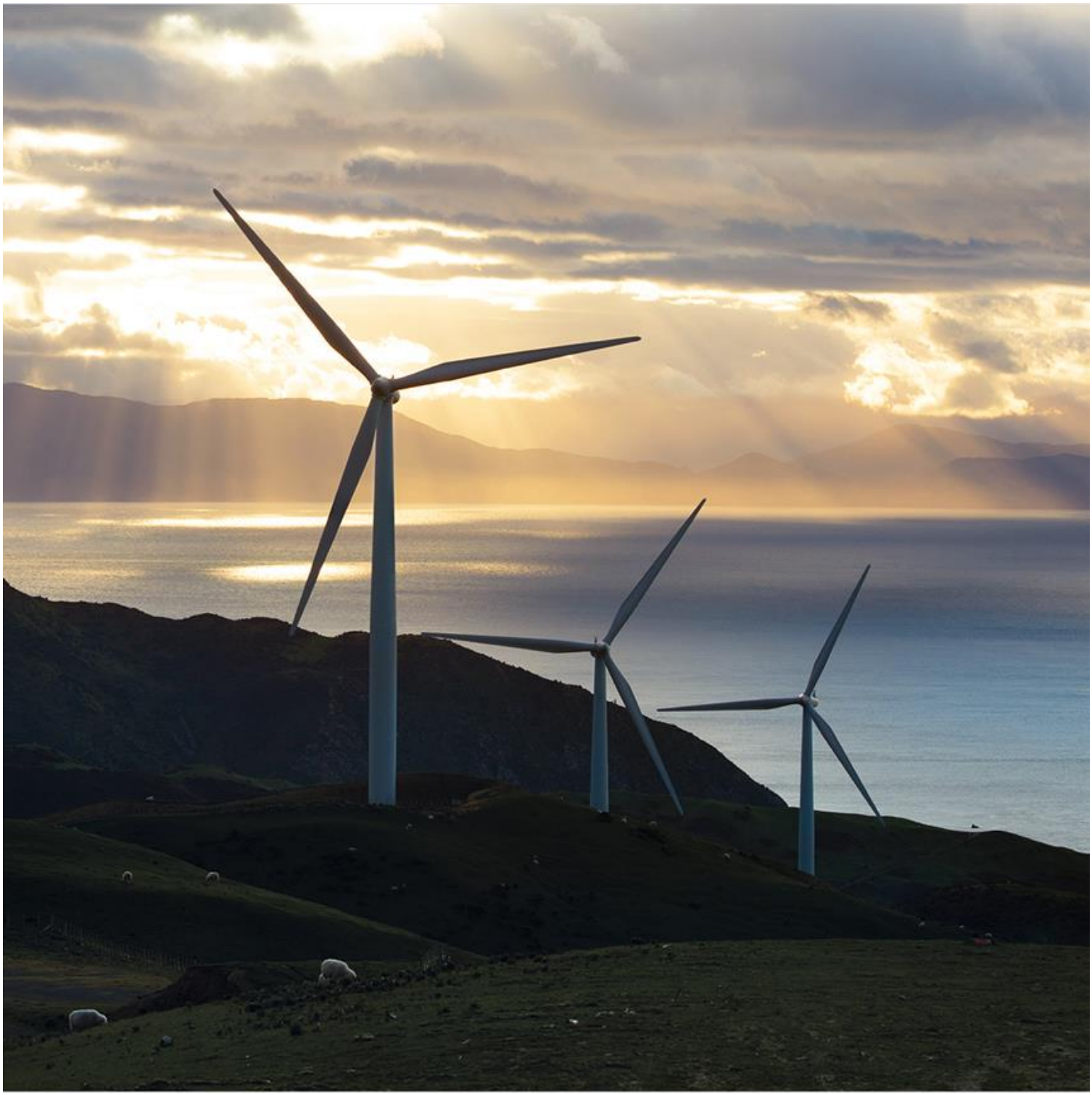
Meridian Cross-Submission

Preliminary decision on claim of an undesirable trading situation

16 September 2020



This cross-submission by Meridian Energy Limited (**Meridian**) responds to submissions received by the Electricity Authority (**Authority**) in response to its preliminary decision on an undesirable trading situation (**UTS**) released on 30 June 2020 (**the preliminary decision**).

Attached to Meridian's submission are three accompanying expert reports or opinions:

- The Brattle Group *Response to Third Party Submissions Regarding Alleged UTS* (**Brattle Report**);
- Sapere Research Group *Cross submission: UTS preliminary decision* (**Sapere Report**); and
- A legal opinion from Russell McVeagh.

The submission is divided into the following parts:

- Part A: Executive Summary
- Part B: No evidence of an extraordinary event or that confidence in the wholesale market was threatened
- Part C: "Perfect competition" is not the UTS standard
- Part D: No principled basis to find a UTS at any point in time
- Part E: General consensus that the UTS regime is not the appropriate tool for market reform
- Annex 1: Material in the complainants' submission that is factually inaccurate and/or misleading
- Attachments

For any questions relating to this submission, please contact:

Jason Woolley, General Counsel, DDI: +64 4 381 1206

Sam Fleming, Manager Regulatory and Government Relations, DDI: +64 4 803 2581

Part A: Executive Summary

The submissions received by the Authority in relation to its preliminary decision clearly support the concerns that Meridian raised in its initial submission, that by means of the preliminary decision the Authority has effectively proposed use of the UTS investigation framework as a means to implement market reform. The Authority has a mandate to continually monitor and evaluate the performance of electricity markets. However, the process it must adopt for any market reform it proposes is subject to a clearly defined set of procedural steps to ensure that any such reform is fairly and carefully evaluated by balancing all potential costs and benefits – including unintended costs and benefits – arising from the proposal. By comparison, the UTS regime is a narrow residual jurisdiction to apply quick fixes to resolve extraordinary events that, if left uncorrected, may threaten confidence in the market.

The Authority's preliminary decision did not clearly articulate exactly how the Authority considered the circumstances of 3 to 18 December 2019 amounted to a UTS as defined in the Code. Instead the preliminary decision focused on what outcomes the Authority would prefer or expect. This departure from the UTS test set out in the Code has effectively invited market participants to submit on all manner of grievances about the electricity market, however unfounded, in response to the preliminary decision. Of course, many market participants would prefer that wholesale prices were lower, others would prefer wholesale prices to be higher. These preferences do not assist the Authority in applying the UTS provisions in the Code.

If any of the concerns raised regarding the broader operation of the wholesale market have merit, the proper forum for those concerns would be a proposed change to the market rules and an evaluation and weighing of the respective costs and benefits, in consultation with a range of industry participants, stakeholders and experts. The Authority's UTS jurisdiction is not that forum. Numerous concerns raised in the submissions on the Authority's preliminary decision are irrelevant to the Authority's assessment of whether the events of December 2019 amounted to a UTS.

The common thread running through all of the submissions, including the complainants', is that confidence in the market is undermined when there are not clear rules as to what conduct is permitted and what is prohibited. This uncertainty is heightened when the Authority's preliminary decision misapplies the UTS provisions to retrospectively reclassify

conduct consistent with the normal operation of the market, and that was previously understood to be known and accepted by the Authority, as henceforth undesirable or inappropriate. Meridian invites the Authority to carefully consider each submission and ask whether it demonstrates that there was an extraordinary set of circumstances that threatened to undermine confidence in the wholesale market. Meridian is confident that, in light of all the evidence available, the events in late 2019 did not amount to a UTS as defined in the Code.

Table of contents

Part B: No evidence of an extraordinary event or that confidence in the wholesale market has been threatened

Introduction

Part B below addresses submissions on the following:

- Offer prices in the wholesale spot market were consistent with the normal operation of the market and no evidence to the contrary has been submitted;
- The futures market continued to operate normally; and
- Managing basis risk via generation offers does not constitute a UTS.

Consistent with Meridian's submission on the Authority's preliminary decision, the general consensus (apart from the complainants) is that confidence in and/or the integrity of the wholesale market has not been threatened by the events of December 2019.

The submissions reflect the distinction between conduct that does not meet *the Authority's expectations* (which, as discussed at Part E of this cross-submission, may only properly be considered in a Code amendment process), and conduct that has threatened confidence or integrity in the wholesale market. Indeed, several market participants characterise the events of December 2019 as an ordinary, expected response to an unprecedented rainfall event – these submitters raise significant doubts about *"whether the current conduct is outside the normal operation of the wholesale market, as required for a UTS"*[1], or is indicative of *"wider systemic issues or market failure"*.[2] Indeed, the submissions suggest that while the rainfall of late 2019 was exceptional, the way the market responded was consistent with the normal operation of the market.

Offer prices were consistent with the normal operation of the market

The market behaviours and outcomes under investigation by the Authority were neither extraordinary nor unpredictable. They were no more than the normal operation of the market as it has been designed.

[1] Contact submission, available here, at [28].
[2] Mercury submission, available here, at 3.

Neither the Authority nor the complainants have presented any evidence that the events of 10 November 2019 to 16 January 2020 gave rise to any extraordinary or unforeseen circumstance that might threaten confidence in the wholesale market. To overcome this deficiency, the complainants have adopted the Authority's approach of circumventing the language of the UTS provision and adopting a fundamentally different test of comparing actual prices to a retrospective assessment of what a "workably competitive" or "perfectly competitive" market may have delivered.

Consistent with High Court precedent, Meridian submitted that a generator pricing its offers above SRMC at a given point in time does not amount to a UTS. This was reinforced in others' submissions with, for example, Contact characterising the conduct in December 2019 as a normal response to the high rainfall, observing that:[3]

> *"… over the period in question, competitive pressure in the spot market remained. All parties were competing to trade off volume and price. However the competitive dynamics that would ordinarily occur differed, as a result of South Island hydro generators managing the flooding event. Contact does not consider that the event, in and of itself, would meet the threshold of a UTS as defined in the Code."*

As far as Meridian is aware no one has submitted that Meridian's trading conduct in December 2019 was abnormal. Even the complainants submit that the behaviour was typical, as it has been a regular feature of the market across several years.[4] It was in that sense, expected, and unremarkable. Indeed, even those submissions in support of the preliminary decision appear to be focused on comparing the market outcome in the period against a perfectly competitive counterfactual, which is an entirely separate question to whether the conduct or the outcomes were, in themselves, sufficiently extraordinary to undermine market confidence or the integrity of the market at the time. For example, while Meridian strongly disagrees with the assertion that it has significant market power in any properly defined market (a matter only properly considered in an HSOTC or Code amendment process in any event), even Genesis characterised the events of December 2019 as entirely "predictable" – i.e. unremarkable and normal.[5]

As a consequence of measuring the conduct against a perfect competition standard, a number of submitters identified that the Authority's analysis that SRMC is close to $0 when hydro generators are spilling is unsophisticated and inaccurate:

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[3] Contact submission, available here, at [29].
[4] Complainants' submission, available here, at 23.
[5] Genesis submission, available here, at [7].

- Genesis observed that it *"does not accept the complainants' calculation of $0 MWh plus an arbitrary figure for operational costs is sufficiently sophisticated. It is certainly not an appropriate standard to apply ex-post in a dynamic market."*[6]

- Similarly, Energy Link identifies that *"by definition, opportunity cost is the value of the next-best alternative. The UTS claimants also expressed the view that opportunity cost of water is zero while spilling, adding the "short-run marginal cost (SRMC) is near zero". Without providing any background or explanation, the decision paper appears to have taken this statement at face value."*[7]

During the period in question, Meridian's focus was on the safe management of the flood and minimising risks to people, structures and properties in our catchments. At the same time, we were responding to these conditions by altering our trading strategy, such that our traded water value was progressively falling, and traders were instructed to prioritise volume over price and move as much water as possible.

If the Authority considers that market confidence is undermined unless generators price at the level of SRMC, Meridian questions why the Authority has solely focussed on the actions of the hydro generators during a specified period of a hydrological event. An entirely logical question would be, why has the Authority not investigated whether other generators are similarly pricing at their SRMC, for example thermal generators commonly offer at prices in excess of their SRMC or fuel costs, this has been particularly noticeable since offer prices for thermal generation increased in Spring 2018 and have since stayed higher on average seemingly because of concerns about gas market supply risks. The submission from Neil Walbran Consulting similarly notes instances of very high North Island prices to show that North Island reserve providers do not necessarily offer at marginal cost. The reason the Authority has not investigated whether thermal generators or reserve providers offer at their SRMC is simple – the New Zealand market is simply not designed as a market where generators must bid their costs, it is designed so that generators bid prices at which they are willing to supply.

[6] Genesis submission, available here, at [45].
[7] Energy Link submission, available here, at 1.

The futures markets continued to operate normally in December 2019

Genesis correctly identifies that the Authority's preliminary conclusion that confidence in the futures markets has also been threatened, solely due to its proximity to the spot market, is not supported by *"the evidence in the futures market"*.[8] As Meridian also observed in response to the preliminary decision, the conventional test for whether futures markets were disrupted did not show any such reaction. Participation in FTR and ASX future trading remained steady during December 2019, and prices were within the ordinary variance. In those circumstances:

- there was no threat to confidence or integrity of the futures market; and

- trading behaviour, participation levels, and prices in the futures markets do not support the conclusion that there was a loss of confidence in the spot market (i.e. there was no observable shift in participation or price patterns to indicate confidence in the spot market was threatened).

Managing basis risk via offer prices does not constitute a UTS

Several parties actively acknowledged in response to the preliminary decision that management of basis risk using offer prices is part of the normal operation of the market and does not constitute a UTS.

For example:

- Mercury submits that "*it is appropriate, and has **been a feature of the New Zealand market from design**, for generators to adjust offers to manage absolute price and basis risk exposures*."[9] It goes on to say "*the use of market offers to manage such risks is aligned with promoting competition, reliability and efficiency in the electricity market. Without this ability, the only alternatives available to participants are to reduce retail competition in regions where they are exposed to price or basis risk or, in the case of hydro generators, inefficiently spill water. In the case of large nation-wide integrated generator/retailers it is necessary and efficient to manage price and*

[8] Contact submission, available here, at [35]-[36].
[9] Mercury submission, available here, at 2.

basis exposure through a combination of physical and financial risk management products."[10]

- Contact commented that "*Managing transmission constraints to avoid price separation can be consistent with efficient market operation in a competitive market.*"[11]

- Genesis submitted that *"While the Authority has in the past stated that it does not believe it is acceptable to manage locational price risk with spot offers, the Code is ambiguous on this. We believe it would be useful if the Authority provided firm guidance on the circumstances under which this approach is acceptable."*[12]

Neil Walbran Consulting's submission comments that the Authority should also be mindful of the potential unintended consequences of using its UTS powers to limit the ability of generators to use offer prices to manage basis risk, not least a potential reduction in retail competition in the North Island.[13] Only a proper Code amendment process could identify and weigh these potential unintended consequences.

Concerns were also raised regarding the Authority's process, effectively using the UTS regime to enforce previous warnings made to Meridian in a Code breach investigation context. As Genesis identified, to the extent that the Authority is dissatisfied with a generator's conduct, it should *"govern participants' actions through 'black letter' regulation rather than informal instructions."* The only surprising thing about this observation is that there is a need to make it.

Meridian also notes that the Authority's UTS process has been undermined by misleading statements made to the public by the complainants.[14] The preliminary decision has been presented as a final finding. The undermining of due process by the complainants risks a fait accompli and makes it difficult for the Authority to now find that a UTS did not occur.

[10] Mercury submission, available here, at 2.
[11] Contact submission, available here, at [38].
[12] Genesis submission, available here, at [7]-[8].
[13] Neil Walbran Consulting submission, available here, at 2.
[14] Statements undermining the due process of the Authority include: Meridian has "been caught taking Kiwis for a ride to the tune of 80 million dollars profit" (from Electric Kiwi); and Meridian has "been found rigging wholesale markets" and there has been a "cost to all consumers in New Zealand" (from Ecotricity). It should go without saying that these statements have been made without any final decision or finding from the Authority and are entirely misleading as the Authority's preliminary decision in no way suggested an "80 million dollars profit" to Meridian and explicitly stated, "there was no immediate effect on consumers due to most consumers being on fixed price contracts".

However, the Authority must nonetheless carefully and objectively consider the evidence presented and decide whether a UTS occurred as defined in the Code.

Conclusion

In summary, there appears to be broad consensus amongst industry participants that the market situation in 2019 was not unexpected, and that market participants were operating within the parameters of the Code (regardless of whether they approve of the Code as currently structured or think it should be amended). No credible evidence of a threat to confidence in and/or the integrity of the wholesale market was presented.

The Authority has recently observed in formal correspondence that its role is to:[15]

> "*Promote competition for the long term benefit of consumers – it is not to stifle opportunities for new and innovative business models or tell firms how they should manage their risks and investments. These sorts of choices are best left for entrepreneurs, and are not matters for a regulator to dictate in an open and competitive market"*

Meridian urges the Authority to turn its mind to its UTS jurisdiction in this context. Submissions received on the preliminary decision suggest that if the preliminary decision were confirmed, that would represent use of the Authority's powers with the purpose of dictating to Meridian and other generators how they should manage their risks or generation assets.

Industry consensus is that the market was operating normally in December 2019. There was no threat to confidence or integrity for the Authority to "correct". As set out in Part E, to the extent that the Authority considers it possible that intervention in the market would further its goal of promoting competition for the long term benefit of consumers, that analysis should occur through the proper Code amendment process.

[15] Letter from Authority Chief Executive to Al Yates (1 July 2020), available here, at 4.

Part C: "Perfect competition" is not the UTS standard

The Authority cannot use its preliminary decision to effectively replace the current UTS provisions in the Code with a novel test that asks whether market outcomes are consistent with what the Authority expects to observe in a workably competitive market. However, even if it could, the test of what the Authority might expect should involve an orthodox application of the "workable competition" standard. There is an obvious disconnect between the "workable competition" label applied and the actual analysis undertaken by the Authority and the complainants.

Professor Andy Philpott (on behalf of the Electric Power Optimization Centre) quickly recognised that in reality the Authority has applied a perfect competition standard:[16]

> *"The Electricity Authority has adopted this approach in making their preliminary decision using vSPD analysis that compares observed generator behaviour with what would be expected in a perfectly competitive market."*

The Authority has substituted the clear language of the UTS provisions with an overlay of a newly constructed counterfactual test based on what a "workably competitive" or indeed "perfectly competitive" market may deliver.

As noted in the appended Sapere Report, a perfect competition benchmark is not the correct test for a UTS. If it were part of the test, a perfect competition benchmark might provide a computable benchmark, but it would also introduce bias into the assessment of whether a UTS arose. Price formation in real-world markets does not reflect perfect competition assumptions. Information limitations, physical and environmental limitations, and the limitations of market rules mean that "market outcomes cannot reflect outcomes from perfect competition other than by coincidence. The Authority's test meant it assessed observed outcomes against an unobtainable standard."[17]

[16] Andy Philpot (EPOC) submission, available here, at 3.
[17] Sapere Report, at [13].

The introduction of any regulatory test to assess conduct that can only be applied retrospectively with the full benefit of hindsight is simply unprincipled, and unworkable. This same sentiment was expressed by Genesis, who submitted that:[18]

> *"We caution against applying perfect knowledge retrospectively to the operation of a dynamic market to assess that market's effectiveness. Any market assessed in this manner is highly vulnerable to perceptions of failure or manipulation, particularly when the outcome is the result of decisions made in extraordinary circumstances in real time, as was the case during the South Island flood event of late 2019."*

A genuine UTS event would not be unremarkable in real time, it would be immediately apparent, because it threatens confidence in the market. Rather, the time taken in this investigation to "uncover" the alleged UTS, itself has disrupted market confidence.

If the Authority requires almost a year to investigate an event using complicated economic modelling with the benefit of 20/20 hindsight to determine whether confidence in the market was undermined, that in itself is evidence that there has been no UTS requiring urgent restorative action.

[18] Genesis submission, available here, at [5].

Part D: No principled basis to find a UTS at any point in time

Introduction

Part D below addresses:

- That the Authority is time barred from investigating any potential UTS prior to 27 November 2019; and
- That the complainants have failed to adduce any credible evidence justifying extending the duration of the UTS period.

The Authority is time barred from investigating any potential UTS prior to 27 November 2019

The Authority does not have any jurisdiction to investigate a potential UTS arising out of events that occur more than 10 business days prior to receiving a complaint.[19] The relatively short limitation period is entirely consistent with the nature of the UTS regime. It is intended to cover extraordinary events that threaten to undermine the confidence in, or integrity of, the wholesale market. A true UTS event should be immediately noticeable such that complainants would be approaching the Authority as a matter of urgency. The mere fact that the complainants chose to do nothing until 12 December 2019 is legally, and factually, determinative of the absence of any UTS in this instance.

The complainants have failed to adduce any credible evidence justifying extending the duration of the UTS period

The Authority rightly found no evidence upon which to establish even a *prima facie* case of a UTS outside of the limited 3 to 18 December 2019 period. Indeed, for the reasons advanced in Meridian's initial submission, there is no basis whatsoever to find a UTS at any period between 10 November 2019 and 16 January 2020.

In order to extend the alleged UTS period, the complainants rely on:[20]

[19] For further detail see the appended Russell McVeagh opinion.
[20] Complainants' submission, available here, at 1-2.

- A notice issued by the Authority that they are investigating Meridian for a breach of HSOTC rules during the period from 10 November 2019 and 16 January 2020; and
- Modelling undertaken by Haast.

The HSOTC notice is simply irrelevant

The Authority's notice of its HSOTC investigation is completely irrelevant to the question of whether the events of 10 November 2019 to 16 January 2020 constitute a UTS. That notice merely sets what the Authority is investigating, which logically matches the complainants' allegation in relation to the HSOTC rules, which is an entirely separate test.

This is a critical distinction. In determining whether a UTS has arisen, the Authority is obliged to act in a judicial role. In respect of an allegation of breach of the HSOTC rules, the Authority is an investigator, and, if it considers the allegations warrant taking further, it adopts the role as prosecutor, in taking the matter to the Rulings Panel. Only the Rulings Panel can determine, in its judicial function, whether a breach of the HSOTC rules has occurred. Reinforcing the importance of this separation of functions is the express provision in the Code that the Authority must appoint a different, "independent investigator" to investigate any allegation of breach of the HSOTC rules.

It would be inappropriate for the Authority to treat an "alleged breach" of the HSOTC standard as a proven breach of the UTS standard or as setting the duration of a UTS. The fact the complainants believe it appropriate to suggest this approach reinforces the confusion that has arisen as a result of the Authority relying on its earlier HSOTC "warning letter" (in respect of an investigation that was not taken to the Rulings Panel) in support of its preliminary decision.

To proceed as the complainants suggest would cast serious doubt on not only the legitimacy of the UTS decision but also on the Authority's ability to investigate the alleged HSOTC breach in an impartial manner. The Authority correctly notes in the preliminary decision "the test for a UTS is separate and a breach of the HSOTC provisions does not imply or require a UTS".[21] The Authority's notice of its HSOTC investigation plainly does not provide any justification for extending the duration of the alleged UTS.

[21] Electricity Authority Preliminary Decision, available here, at iii.

Modelling undertaken by the complainants is of limited utility

The complainants utilise a relatively straightforward repeated vSPD solve model as a proxy for what the spot market would have produced on the day as a result of assuming different historic offer behaviours from (in this case) South Island hydro generators as inputs into the System Operator's SPD market model.

Solves of vSPD with different input assumptions are limited in that they do not take into account operational, resource consent, or hydraulic limitations. For example, while it is simple enough to override all offer prices for a spilling South Island hydro station (as the complainants have done) this says nothing about whether or not the vSPD solve that results is realistic in terms of:

- Whether the station or stations that have an offer override are physically capable of achieving the outcome;
- Whether hydraulic outcomes are achievable such as balancing a chain of hydro lakes and any constraints on spillways or canals or river flows are accounted for; and
- Whether the resulting downstream flows and lake levels are compliant with resource consents and safe operating limitations during a severe flood event.

All of the complainants' vSPD modelling simply resets offer prices in the market and does not attempt to account for the real-world factors above. It would be difficult for the complainants to do so without a detailed understanding of the schemes, power stations and associated resource consents and health and safety requirements. The Authority's modelling in the preliminary decision seeks to take into account these real-world factors by restricting the changes to Benmore where some operational limitations were understood, and hydraulic limitations could be avoided by switching generation for spill while holding lake levels and downstream flows the same in both the factual and counterfactual scenarios. The complainants have made no attempt to do this.

These shortfalls of the vSPD modelling by the complainants make it of limited value and mean that it cannot support the conclusions suggested in the complainants' submission.

In addition, while the modelling may provide a limited counterfactual reference point for the market in a short run of discrete trading periods, its robustness as a tool for analysis diminishes exponentially as the time period it is applied to increases. Running the vSPD model for the entire investigation period from 10 November 2019 to 16 January 2020, as the

complainants have done, ultimately renders results that are completely divorced from how a market would operate in practice, and is therefore of limited to no utility. The model is simply not designed to account for the dynamic process of rivalry in the market and the ways that various market participants might in the real world respond to the changes in offers and market prices that are forced by the offer overrides.

The appended Brattle report highlights further the limitations of the modelling used by the complainants and demonstrates that it would be unreasonable for the Authority to reach any findings based on that modelling.

Part E: General consensus that the UTS regime is not the appropriate tool for market reform

Meridian's initial submission set out that if the Authority wants to reform the normal operation of the wholesale market then the Code amendment process is the right way to go about it to allow for a proper assessment of the costs and benefits to consumers in the long-term.

Part E below sets out:

- The consequences of the Authority's reframing of the UTS provisions – namely that most submissions are about market reform options rather than whether the requisite elements of a UTS have been satisfied;
- The importance of clear rules for market confidence; and
- The general consensus amongst most submitters that a UTS decision is not the appropriate tool for market reform.

Most of the submissions received have limited relevance to a UTS investigation

The focus of a UTS investigation must be on whether there are extraordinary circumstances that have threatened confidence in the market. The preliminary decision instead focussed on what, after a lengthy and detailed analysis and reconstruction after the fact, the Authority would "expect to see" in a workably (tending toward perfectly) competitive wholesale market.[22]

The immediate consequence of this positioning is that most of the submissions have similarly adopted a market reform approach, rather than addressing whether the necessary elements of a UTS have been satisfied. For example:

- Andy Philpott expresses no view as to whether the events constitute a UTS, rather he offers a perspective on how the Authority should identify potential issues requiring reform in the future, "our submission is not focused on events that occurred during the

[22] The Authority also asks, in place of the UTS test in the Code, whether wholesale market outcomes reflect "market fundamentals" or supply and demand. That is not the correct test, but even if it was, the appended Sapere Report notes at [5] that according to the academic literature "[t]he relevant underlying supply and demand conditions are … not just the physical conditions of production and consumption, but also the rules governing the rights and duties of those carrying out transactions." In this sense, there is nothing to suggest that the observed outcomes were inconsistent with underlying market conditions.

period in question. We are taking the opportunity presented by a submission to give an opinion on wholesale electricity market competition in New Zealand, and the role of the Electricity Authority in regulating this market";[23]

- Genesis expressly reserved judgment on whether the circumstances constituted a UTS and instead outlined its perspective on potential issues with the wholesale market more broadly;[24] and

- NZ Steel has interpreted the preliminary decision as giving rise to an expectation that the outcome of the Authority's investigation will be refinements to market rules and/or the imposition of sanctions – neither of which are the purpose of a UTS investigation.[25]

Notwithstanding the limited relevance of the submissions received for a UTS investigation, the submissions clearly demonstrate a general consensus amongst market participants that:

- It is important to have clear rules that are applied consistency; and

- It is inappropriate to use a UTS regime as the mechanism for market reform.

It is important to have clear rules that are applied consistency

Meridian fully endorses the recent statement of the Chief Executive of the Authority that:[26]

> *"Reactionary and alarmist changes in direction are likely to work against the long-term benefit of consumers. A lack of transparency and consistency in regulation will deter the investments New Zealand needs to transition to a low-carbon future."*

The preliminary decision is entirely inconsistent with previous decisions of the Authority, which gives rise to the undesirable situation of market participants not being able to assess the lawfulness of their conduct in advance. As Genesis rightly identified:[27]

> *"The Authority's position could thus be summarised as "it is unacceptable to structure offers to manage transmission constraints, except when the Authority determines it is acceptable,*

[23] Andy Philpot (EPOC) submission, available here, at 3.
[24] Genesis submission, available here, at [2].
[25] NZ Steel submission, available here, at 1.
[26] Letter from Authority Chief Executive to Al Yates (1 July 2020), available here, at 3.
[27] Genesis submission, available here, at [30].

which will be made clear ex-post". It should not be controversial to state that this is not a workable standard in practice."

Meridian agrees with the view expressed by Contact that:[28]

Regulatory certainty and consistent application of regulation is essential.

Even the complainants are in agreement that clear rules as to what is permissible are essential for confidence in the market:[29]

Confidence in, and the integrity of, the market requires clear and enforced rules that protect against opportunistic behaviour and abuses of market power.

Even though Meridian and the complainants have different views as to what an appropriate set of rules may be, there is agreement that the rules need to be clear in order for market participants to have confidence in the market.

There is a general consensus that a UTS decision is not the appropriate tool for market reform

As mentioned above, the events of 10 December 2019 to 16 January 2020 represented nothing more than the normal operation of the market as currently designed. It is of course within the remit of the Authority to change the design of the market to introduce a new normal. But any market reform needs to be carried out in a considered manner to properly allow due evaluation and weighing of any unintended consequences resulting from market redesign.

It is clear from the submissions received that many market participants are concerned that the Authority is inappropriately using this UTS decision to fundamentally change the design of the market:

- Trustpower observed that *"if the Authority wishes to introduce a prohibition on generator offers being used to manage transmission constraints, this should be considered as a policy matter rather than indirectly introduced via the Authority's compliance activities. Any reset of the boundaries for behaviour within the market*

[28] Contact submission, available here, at [34].
[29] Complainants' submission, available here, at 29.

should occur ex-ante through an appropriate regulatory instrument (i.e. code change, issuance of guidelines etc.)"[30]

- Contact similarly commented that *"to the extent that the Authority considers that any policy change is required to address the concerns raised in its preliminary decision, Contact does not consider that this should occur through a UTS compliance process."*[31]

- Mercury also *"does not consider the UTS provisions are the most appropriate arrangements to address issues of market conduct compared to transparent and effective conduct provisions."*[32]

This is not a case where market participants are demanding that a proper market reform process be followed for the sake of it. The effective rule change as a result of any UTS finding in this case would likely have material consequences for the operation of, including future investment in, the New Zealand electricity market. These consequences need to be properly evaluated.

Such a process is also required to clearly articulate what any new rules might be, for example, whether the new rule is that generators must price at SRMC, or that they must be blind to the cost of a transmission constrain binding, or both. The scope of the rule would also need to be clearly expressed, for example whether the rule is only applicable during spill, or generally and whether the rule only applies to hydro generators, or to all generators and ancillary service agents.

To that end, Meridian agrees with the observations made by Energy Link during the submission process. In particular, Energy Link highlights that implementing policy changes by way of a UTS decision without a proper robust consultation process that allows for a proper consideration of the costs and benefits is "playing roulette" with the electricity market:

> *"It is our observation that relative to when ECNZ managed hydro storage, Meridian provides a significantly higher level of supply security. Consumers benefit from this high level of supply security during dry periods when inflows are below average and hydro storage falls below what might otherwise be expected given the time of year.*[33]

[30] Trustpower submission, available here, at 2.
[31] Contact submission, available here, at [32].
[32] Mercury submission, available here, at 3.
[33] Energy Link submission, available here, at 1.

> …
> *Nor does the decision paper consider whether, by upholding the UTS decision, there is a risk that the lakes will be manged less conservatively in the future with the objective of reducing the probability of spill. If offer prices are regulated, or effectively regulated by virtue of the UTS decision being upheld, then the value of Meridian's current long-term storage strategy might fall below its opportunity cost, which could trigger a move to a lower level of supply security.*[34]
> …
> *Put another way, in the longer term there are trade-offs between spill and security, and these are taken into account by market participants when formulating strategies and operating according to those strategies. It is essential that those trade-offs are considered, to reduce the potential for unintended consequences. For example, we could end up with a uniquely Kiwi take on the 'missing money' problem that is well known in competitive energy-only electricity markets. Consumers certainly want cheap power, but as we know, the vast majority of consumers also place a high value on having a secure supply.*[35]
> …
> *The link between the wet period which is the subject of the UTS, and the swaption is not obvious, but the swaption, and the high level of retail competition, will no doubt be factored into Meridian's storage management strategy, and we suggest this should be considered along with our suggestions above. As above, this is all about avoiding unintended consequences.*[36]

Neil Walbran similarly identifies that a potential unintended consequence of the preliminary decision is the reduction of competition in the North Island retail markets as a result of insufficient risk management tools available to South Island generators to manage their North Island exposure. Neil Walbran warns that:[37]

> *Should the preliminary UTS decision become final in its current form it would risk reducing this competitive pressure. This would be to the long term detriment of North Island consumers, and to New Zealand consumers as a whole.*

Meridian reserves its position in relation to the unintended consequences identified by these independent experts. However, what is clear from these observations is that the Authority is seeking to reform the design of the market and that there are clear risks of unintended consequences that need to be considered in the proper forum (not a UTS investigation).

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[34] Energy Link submission, available here, at 2.
[35] Energy Link submission, available here, at 2.
[36] Energy Link submission, available here, at 3.
[37] Neil Walbran submission, available here, at 2.

Annex 1: Material in the complainants' submission that is factually inaccurate and/or misleading

This list is not intended to be comprehensive.

Reference	Quote	Meridian's response
Page 1, bullet 1	"Our views align with the Electricity Authority's High Standard of Trading Conduct (HSOTC) investigation which alleges Contact was in breach between 11 November 2019 and 28 December 2019, and Meridian was in breach between 10 November 2019 and 16 January 2020"	The suggestion that the complainants' views align with the views of the Authority's HSOTC investigation mischaracterises the status and nature of that investigation. Although the Authority has opened an investigation into the "allegations" it would be highly inappropriate and in fact unlawful to form any views until the investigation has been completed. Furthermore, the Authority does not have any jurisdiction to determine whether the HSOTC rules were breached – that is the role of the Rulings Panel.
Page 1, footnote 2	"The analysis in this submission is based on SRMC = $0.01MWh."	By adopting an assumption that the SRMC of Meridian whilst spilling was only $0.01MWh, the figures quoted throughout the submission overstate any hypothetical impact of the conduct. This position is also inconsistent with the complainants' concession in footnote 3 of the complainants' letter to the Authority on 12 December that "We chose $5 to reflect: (i) the water value was virtually $0 for the entire period (11th Nov to 9 Dec), but there may be some O&M costs etc which could mean SRMC is above zero". The inaccurate impression generated by adopting that erroneous assumption simply cannot be corrected by including an analysis based on a SRMC of $5/MWh and $6.35MWh in an Appendix.
Page 1, footnote 5.	"The Authority describes unnecessary spill as "excess spill" "where generators spilled water in preference to lowering their offer prices""	The complainants have misquoted the Authority's approach to determining the amount of excess spill. At no point did the preliminary decision define "excess spill" to mean "where generators spilled water in preference to lowering their offer prices". The Authority set out, at paragraph 14.4 of the preliminary decision, a three limb test of what constituted excess spill that appropriately recognised operating constraints, resource consent constraints and transmission constraints.
Page 5	"We consider that withholding of capacity and unnecessary spill of water is an abuse of market power"	Meridian did not, at any stage during the relevant period, withhold capacity. Meridian made offers for its entire operational capacity taking into account both operational and resource consent constraints. The suggestion by the complainants that "unnecessary spill" does not consider such constraints is simply wrong and misleading. The complainants have failed to show the requisite causal connection between the existence of "market power", which would require an assessment of what the relevant "market" is, and the conduct of

Reference	Quote	Meridian's response
		"withholding of capacity and unnecessary spill of water". The evidence clearly demonstrates that the conduct was engaged in by three different generators, which is the antithesis of an "abuse of market power".
Page 10	Various quotes from Meridian and Powershop submissions dated 2011	Meridian and Powershop comments from the 2011 UTS investigation have been selectively quoted in the complainants' submission. To give the full context, in 2011 the Authority found that a UTS developed on 26 March 2011 because the events on that day threatened, or may have threatened, trading on the wholesale market for electricity and would be likely to have precluded the maintenance of orderly trading or proper settlement of trades. The Authority gave as reasons for the decision that Genesis offers set the market prices for Hamilton and regions north of Hamilton at around $20,000 during trading periods 22 to 35, during a transmission outage. In the context of the 2011 UTS, it was abundantly clear from a number of market indicators that confidence in the market had been shaken. The question then for submitters like Meridian was how, following the finding of a UTS, prices should be recalculated over the relevant fourteen trading periods. The Authority was considering adjusting Huntly offers to reflect the long run marginal cost (LRMC) of new entrant diesel generation or demand response at around $3,000/MWh. Meridian considered this too high, however the submissions at the time clearly stated that a UTS investigation is not the best place to have a policy debate about how generators should offer, rather Meridian sought a pragmatic normalisation of prices to correct the UTS. Meridian was clear that "the Authority should not, in the context of a UTS investigation, attempt to either: a) prescriptively describe the boundary between acceptable and unacceptable offers: it is enough to state that the 26 March situation was clearly across the line; or b) set prices at what the Authority considers the "right" level."
Page 21	"The Authority can consider both purpose and effect: We draw parallels with the Commerce Act cartel provisions under which it does not matter whether the purpose or effect was to lessen competition for there to have collusion"	It is entirely unclear what the relevance of an entirely different prohibition in a different legislative framework is to the investigation of an UTS.

Reference	Quote	Meridian's response
Page 23	"Historical evidence of what has happened in the market – there appears to be an ongoing pattern of behaviour which should be addressed. … To the extent the Authority considers Meridian's conduct is repeated and/or ongoing should weight against Meridian in both the UTS decision and HSOTC investigation."	Meridian agrees with the complainants that its conduct was normal, ordinary and unremarkable. However, Meridian disagrees with the conclusion that the complainants draw from this observation. The concession that there is an "ongoing pattern of behaviour" recognises that the conduct is the very antithesis of extraordinary conduct that could constitute a UTS.
Page 23	"Meridian appears to have ignored warnings by the Authority"	The Authority does not have the jurisdiction to determine whether there has been a breach of the HSOTC provisions. The Authority elected to not take the case of Meridian's conduct on 2 June 2016 to the Rulings Panel for a determination as to whether the HSOTC provisions had been breached. A warning letter by a body acting in a capacity as a prosecutor has no formal legal status. Meridian's longstanding position has been that its conduct did not breach the HSOTC provisions. Meridian has always been entirely transparent about this and has asked the Authority on many occasions to clarify the trading conduct provisions in the Code.
Page 24	"Absence of tools to hedge locational risk is no defence against misuse of market power and should not be treated as a mitigating factor"	The Supreme Court has been clear that in assessing whether a firm with a substantial degree of market power has misused its market power (or taken advantage of its market power to adopt the actual statutory language in s 36 of the Commerce Act) requires a counterfactual assessment of whether the firm would have engaged in the same conduct but for its substantial degree of market power. The absence of tools to hedge locational risk is a legitimate business justification why any firm (not just a hypothetical firm with a substantial degree of market power) would use offers to manage this very real risk. Accordingly, it is a defence against any allegation of misuse of market power as the market power is not causative of the trading strategy.
Page 29	"Meridian is gross pivotal 100% of the time in the South Island which provides it with considerable ability to mis-use market power to the (long-term) detriment of consumers"	The statement that Meridian is gross pivotal "100% of the time in the South Island" is factually incorrect. The complainants cite the MDAG "High Standard of Trading Conduct Provisions" Discussion Paper in support. As set out in Meridian's response to MDAG, the gross pivotal analysis is highly dependent on what methodology is adopted and estimates of how often one, or more generator, is gross pivotal in the South Island range from 9% to 100% of trading periods. Furthermore, by focussing on gross pivotal status, the complainants ignore a material factor in the decision making process of vertically integrated gentailers. The existence of a retail contract book significantly limits the ability of any vertically integrated generator who may temporarily be "gross pivotal" from misusing its gross-pivotal status to the detriment of consumers. Gentailers have an incentive to

Reference	Quote	Meridian's response
		ensure that they generate at least as much volume as their retail contract book and generally offer volumes to cover that contract position at very low prices to ensure those volumes clear.
Page 29	"The decision should be explicit about all elements of the trading situation that were undesirable, including fault"	The complainants appear to have misconstrued what the purpose of a UTS finding is. The UTS provision is aimed at corrected an extraordinary circumstance that threatens to undermine confidence in the market. "Fault" is a completely foreign concept to the UTS regime and Meridian cautions the Authority against trying to introduce any fault-based element to the UTS regime. The introduction of a fault-based element will make it more difficult for the Authority to determine that there has been a UTS and provide urgent remedial relief. Furthermore, for those elements of the Code where fault is required to be established and the focus is on punishment rather than relief, the Authority does not act as the judicial decision maker.

Attachments

Brattle Report

Sapere Report

Russell McVeagh Opinion

Response to Third Party Submissions Regarding Alleged UTS of 2019

PREPARED FOR

Meridian Energy

PREPARED BY

Pinar Bagci
James Reitzes
John Tsoukalis

16 September 2020

THE Brattle GROUP

Notice

- This report was prepared for Meridian Energy Ltd, in accordance with The Brattle Group's engagement terms, and is intended to be read and used as a whole and not in parts.
- The report reflects the analyses and opinions of the authors and does not necessarily reflect those of The Brattle Group's clients or other consultants.

Table of Contents

Executive Summary

1. Meridian has asked The Brattle Group to respond to the economic issues raised in submissions from third parties regarding the Electricity Authority's preliminary decision on the alleged UTS in late 2019 and early 2020.

2. In this submission we respond primarily to the main themes of some third-party submissions to the UTS investigation that, in workably competitive markets, generator offers should always reflect their short-run marginal costs (SRMC). We also provide a preliminary response to the assumptions and analysis of the modelling undertaken by Haast Energy and Professor Philpott which use the SRMC standard as the workably competitive counterfactual.

3. The Haast and Philpott submissions appear to equate a workably competitive market with the theoretical construct of perfect competition in which generators' offers always reflect their SRMC. Such an approach is inconsistent with the workable competition paradigm of economic regulation in New Zealand. It also does not fit the real-world design, structure and energy mix of New Zealand's energy-only electricity market. In other words, Meridian is being held to a standard that is not relevant within the present design of the New Zealand market.

4. As we explained in the first Brattle submission,[1] prices in energy-only markets must be expected to rise above SRMC to reflect physical trading conditions and generators' bidding strategies. In a market in which all generators are paid the system marginal price (SMP), it is economically rational for generators to structure their bids in a way that anticipates the level of the SMP in order to maximise their revenues. The concentrated structure of the New Zealand market means that many generators are potentially price-setting, resulting in prices deviating from SRMC depending on prevailing market circumstances and economic trading strategies.

[1] "New Zealand Electricity Authority's Preliminary Decision on UTS", Response prepared by The Brattle Group for Meridian Energy, 18 August, 2020. https://www.ea.govt.nz/code-and-compliance/uts/undesirable-trading-situations-decisions/10-november-2019/

5. The physical characteristics of the New Zealand electricity market also have an important bearing on generator behaviour. The large share of hydro, including run of river, makes it highly complex to manage trading during abnormal weather conditions, such as that occurring during December 2019. In such extreme circumstances, the focus of hydro generators shifts from executing trading strategies to managing water flow. The UTS investigation is being undertaken with the benefit of hindsight which diminishes the uncertainty of real-time hydro management. For real world analysis, Meridian's bidding conduct should be assessed within the real-time context of an extreme weather situation in which the primary focus was the management of water.

6. Haast Energy claims an extended period of UTS beyond the 3-18 December period. However, the extended time period does not account for the differing physical and trading conditions that occurred within this period. As the time period of the analysis lengthens, it becomes increasingly unlikely that the assumptions underlying Haast's implementation of the vSPD model will hold throughout the period. Implied changes to generation patterns, market pricing, spill management, and storage management from week to week must all be considered. Haast has not done this.

7. Generator offers in the New Zealand electricity market reflect the prevailing physical circumstances and trading characteristics associated with the current structure and design of the market. This means that market prices may deviate from the perfect competition standard as part of the process of achieving long-run efficiency and that the speed and extent of adjustments to changing supply and demand conditions may not be predictable ex ante.

8. If the Electricity Authority wishes to force prices to reflect SRMC, it should work to achieve this through changes in market design, rather than through a UTS investigation. The proper route is to engage in open consultations with market participants to determine if changes in the design and trading rules of New Zealand's electricity market, which encourage generators to behave differently, may be of benefit to consumers in the long-term.

I. Workable competition

9. New Zealand's regulatory policy towards its electricity market is based on the principle of "workable or effective competition".[2] A workably competitive market is one in which outcomes are reasonably close to what may be found in strongly competitive markets. However, the existence of workable competition cannot readily be tested by analysing outcomes at a particular point in time. Outcomes in workably competitive markets tend towards cost-reflective prices and normal returns over the long-term.

10. The focus on achieving long-term benefits for consumers is emphasized in Section 2.1.1 of the Electricity Authority's interpretation of its statutory objectives,[3] which states its objective "as requiring it to exercise its functions in section 16 of the [Electricity Industry] Act in ways that, *for the long-term benefit of electricity consumers* [the Authority's emphasis]:

    - 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…."

11. Furthermore, in relation to the competition limb of the Act, the Authority interprets competition to mean workable or effective competition. In regard to long-term benefit, the Authority states that its focus is long-term efficiency which includes taking into account long-term opportunities and incentives for efficient entry, exit, investment and innovation in the electricity industry, by both suppliers and consumers.

12. The workable competition paradigm, which governs the Authority's regulation of New Zealand's electricity market, may be distinguished from a perfectly competitive market in which prices always reflect short-run efficient costs. As explained in our previous submission, and consistent with the Authority's interpretation of the Electricity Industry Act, workably competitive markets typically target long-run market efficiency, where firms have incentives to

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2 See "Interpretation of the Authority's statutory objective", Electricity Authority, 14 February, 2011, Section 2.21.

3 "Interpretation of the Authority's statutory objective", Electricity Authority, 14 February, 2011.

invest in capacity and enter the market when prices are at attractive levels. The corollary is that there may be periodic deviations from short-run efficiency in the sense of prices that do not reflect SRMC. In workably competitive markets, the entry process disciplines prices that exceed levels needed to recover capacity costs, while the ability of firms to exit the market boosts prices when they are below those levels. This leads to a price level over the long-term that is consistent with long-run marginal costs.

13. The tension between short-run and long-run efficiency is present in all energy markets, as described in the previous Brattle submission. We explained in our previous submission that, due to the "missing money" problem, energy-only markets work well provided prices rise sufficiently at times such that generators are able to recover their capacity costs.

14. Investors in energy-only markets must trust regulators not to subsequently undermine the market design in a way that reduces generators' ability to recover capacity costs. Jurisdictions that mostly contain low-variable cost generation resources (such as hydro, geothermal, wind, and solar) may find that the energy market alone does not provide enough revenue to cover generators' capacity costs.

15. Using an SRMC standard as a counterfactual by which to judge whether Meridian's behaviour constituted a UTS is inconsistent with the workable competition paradigm of the New Zealand market and also a departure from the design and regulatory approach of other energy-only markets, a selection of which we briefly summarize below.

II. Alternative approaches to regulating energy-only markets

16. In the previous Brattle submission, we described two different approaches to achieving long-run efficiency in the energy-only markets of AESO in Alberta and ERCOT in Texas. The ERCOT market design is structured to achieve high prices during tight supply conditions, usually during periods of peak summer load. Marginal generation resources in the market anticipate that they will be able to recover their capacity costs during these high-priced hours. If resources do not recover capacity costs in those hours, they will exit the market and the reserve margin (i.e., excess capacity for reliability purposes) will decrease.

If generators recover their capacity costs, it will attract new investors into the market and the reserve margin will increase. The reserve margin in ERCOT, and therefore the level of resource adequacy and reliability, is determined by market outcomes.

17. The ERCOT market allows prices to increase to $9,000/MWh, to reflect the marginal cost of power from supramarginal resources or the expected value of lost load during shortage conditions, but it also contains a price mitigation regime that caps offers from generators at an estimate of SRMC when their supply is necessary to solve a transmission constraint in the market. Otherwise, each generator is free to offer as it would like into the market.

18. The AESO market in Alberta takes a slightly different approach from ERCOT. It is less tolerant of price spikes as prices are capped at $1,000/MWh, but prices are allowed to rise above SRMC in many more hours during the year, not just during tight supply. It also does not take the same market power mitigation approach. Specifically, there are no ex ante generator offer mitigation measures taken in Alberta.

19. The ERCOT and AESO approaches represent alternative methods for achieving long-run efficiency whilst also mitigating potential short-run inefficiencies. In New Zealand's energy-only market, there is no regulatory requirement for generators to adhere to SRMC-based offers. [4] If the Electricity Authority wishes to force generators to bid their SRMC, but still achieve its long-run efficiency aims, it should consider modifications to the current market design and regulation.

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[4] "Interpretation of the Authority's statutory objective", Electricity Authority, 14 February, 2011., states as follows (see Section A.22):

> From an aggregate consumer perspective, workable competition delivers benefits to consumers by placing pressure on firms to set their prices close to their marginal cost of supply.

Section A.23 states:

> Workable competition also delivers productive and dynamic efficiencies, which also have aggregate consumer benefits:
>
> > …(b) dynamic efficiency benefits occur when competition encourages efficient investment in capital goods and innovation, and when it provides consumers with confidence that price movements reflect underlying demand and supply movements.

20. Other energy-only markets, such as ERCOT and AESO, provide generators with comfort over the ability to recover their capacity costs and are therefore more likely to attract efficient entry and long-term investment. By contrast, generators in the New Zealand electricity market will face greater risk over their ability to recover capacity costs if the Authority maintains its draft position on the UTS. Generators such as Meridian have developed economically rational trading strategies to manage such risks and maximise their revenues. The Authority has previously found these trading strategies to be acceptable and consistent with the workable competition framework of New Zealand's energy-only power market.

21. If the Authority wishes to change the conduct of generators by forcing them to offer at SRMC, the correct way to do that is not through a UTS investigation but, rather, through consultation with market participants to consider ways that the design of the New Zealand power market might be modified. We have referred to the experience of other energy-only markets, such as ERCOT in Texas and AESO in Alberta, to indicate where the Authority should work with market participants to ensure generators have the opportunity to recover all their costs and earn a normal return on their investment.

22. Moreover, if the Authority contemplates restricting generator bidding behaviour or otherwise penalizing generators during spill periods through an ex post UTS investigation, or imposing ex ante rules that are overly restrictive, generators may respond by managing their lakes in a manner that reduces the likelihood of a spill occurring. In that event, generators potentially would run their lakes lower, which could adversely affect system reliability during dry conditions.

III. Submission of Haast Energy

23. Haast Energy, OJI, and other independent electricity retailers ("Haast Submission") claim that the UTS period extends from 10 November 2019 to 16 January 2020, and estimate that the offer behaviour of the South Island hydro generators resulted in an increase in spot prices worth $177 million over that period. However, there are several aspects of the Haast analysis that are cause for concern and may invalidate their results.

24. The Haast Submission claims that generator offer prices should reflect SRMC and that the outcomes during the UTS are instead consistent with oligopoly or monopoly market outcomes.[5] The Haast Submission defines offers at SRMC as consistent with the workable competition standard; in reality, Haast is using a perfect competition standard. As described in the previous sections, the workable competition standard applied in New Zealand reflects the realities of the energy-only design of the power market, and is consistent with offers rising above SRMC. If Haast believes that the Authority should apply a perfect competition standard, the more suitable approach is to propose a modification to current trading arrangements.

25. In addition, Haast's modelling has four main limitations due to their failure to adequately account for the following:

- **Water Management**—the legal obligations, environmental restrictions, health and safety regulations, and hydrological conditions that restrict the usage of water through entire hydro schemes, in downstream waterbodies, and in respect of different lake levels.

- **Station Constraints**—the physical capabilities of the hydro power stations. Hydro stations have operational constraints such as rough running ranges that must be avoided, restictions on how quickly they can ramp up or down production, limitations on control structures or spillways (or

[5] 18 August 2020 letter from Haast, OJI, and independent retailers to the Chief Executive of the Electricity Authority https://www.ea.govt.nz/code-and-compliance/uts/undesirable-trading-situations-decisions/10-november-2019/

combinations of flow through generators and control structures), and constraints on how long they can generate power before requiring maintenance. All of this is considered during the iterative process of forecasting dispatch against generation offers to ensure that the final dispatch solution is physically feasible, but it is not considered in the Haast modelling.

- **Modelling of Reserve Risks**—Significant changes in dispatch solutions alter HVDC flows and change the generators that are identified as the largest risk setter in each trading period, requiring an iterative re-run of the System Operator's Reserve Management Tool alongside SPD (to update relevant risk inputs, such as the various free-reserve risk paramaters). In the real world, this adjustment would happen after gate closure. The Haast model does not do this.

- **Competitive Dynamics**—The lower offers and market prices in Haast's simulated counterfactual may have altered the behaviour of other generation owners in the market. For example, other generation owners may have scheduled maintenance outages, altered their purchases of fuel, or adjusted their offers into the market. Different generators may have employed different offer strategies in response to lower offers by their rivals; for example, some may have adjusted their own offers to follow price changes and seek continued dispatch of their generation to cover contracted volumes.

26. Due to its inability to account for the above constraints and market dynamics, the Haast modelling effort is blind to whether or not the outcomes it predicts in its simulated counterfactual are actually achieveable in the real world. In short, Haast has not provided any evidence that the modelling approach it uses can accurately replicate market outcomes.

27. Despite not calibrating its model in a manner that confirms its accuracy, Haast compares its simulated counterfactual market outcomes with actual historical market outcomes. This is an important consideration because if Haast's model is systematically underpredicting market prices, then it would be overpredicting the size of any reduction in market prices associated with its counterfactual scenarios regarding Meridian's (and other generators') price offers.

28. The proper approach is for Haast to first calibrate their model against historical market outcomes to prove that the model can accurately replicate the market. This could have been achieved by conducting a simulation over the many historic periods of spill prior to the end of 2019 for which market outcomes were accepted as normal. If the model works properly, the results of this calibration simulation would closely mimic the real-world historical market outcomes.

29. As Haast has not provided any calibration of its model against the historical performance of the market, there is no way to determine if the model's results are due to offer behaviour by South Island hydro generators (as Haast claims) or simply the result of inaccuracies in their model as it attempts to re-create market outcomes. This type of calibration is industry standard procedure when modelling power markets. The same critique is valid for the modelling efforts undertaken by the Authority and, as described below, by Prof. Philpott.

30. In addition to the limitations of the vSPD modelling provided by Haast discussed above, Haast employs other modelling assumptions that call into question the validity of their results. First, Haast extends their modelling of the UTS period to over two months, which exacerbates the limitations of their modelling effort. Second, Haast employs an implausibly low estimate of the SRMC for hydro resources.

31. The Haast Submission claims the Electricity Authority Preliminary Decision was conservative in its finding of the duration of the alleged UTS. The Haast Submission says this was due to a pattern of "suppression of price separation between South and North islands" from 10 November 2019 to 16 January 2020. However, the longer is the time period covered by the analysis, the larger is the distortion to the results because of the four modelling limitations discussed above. The Haast vSPD model is flawed for an analysis of a short period, but these errors will be magnified in a longer period to the extent that their model misrepresents water management, reserves, station constraints, and competitive dynamics.

32. For example, misrepresenting water management constraints for one week in the model may not significantly impact results, as additional/reduced water can be managed with limited impact on market outcomes for one week. However, misrepresenting water management constraints in the model over two months

of market operation will cause large distortions in the simulated prices and generation dispatch patterns.

33. As Energy Link point out in their submission,[6] the power system and hydro storage management are intrinsically and subtly linked through time. Dynamic intertemporal effects need to be considered carefully, including in extreme conditions, the impacts on security of supply.

34. Haast also assumes a SRMC of hydro resources of $0.01/MWh, which is implausibly low, even during spill conditions. This assumed SRMC does not account for any of the marginal costs associated with hydro production, such as the costs allocated to South Island generators for the HVDC link (allocated based on the MWh of production),[7] the North Island reserve pass through costs (also allocated based on MWh of production),[8] or any other variable costs associated with hydro production.

IV. Submission of Prof. Philpott

35. In a submission by the Electricity Power Optimization Centre, Professor Philpott provides vSPD simulation results, using an SRMC pricing benchmark and calculating an "efficient" opportunity cost of water, which produces counterfactual prices that would result under perfect competition. As Prof. Philpott states, "[p]erfect competition, although arguably unattaintable in practice, is a computable benchmark against which market participant behaviour can be assessed."[9] His submission compares historical and

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6 19 August 2020 Energy Link "Submission on UTS Nov, Dec-19 Spilling" https://www.ea.govt.nz/code-and-compliance/uts/undesirable-trading-situations-decisions/10-november-2019/.

7 See Electricity Authority, Code and Compliance, Schedule 12.4 "Transmission Pricing Methodology" located at https://www.ea.govt.nz/code-and-compliance/the-code/part-12-transport/schedule-12-4.

8 See Electricity Authority, Code and Compliance, Part 8 "Common Quality", Section 8.59 located at https://www.ea.govt.nz/code-and-compliance/the-code/part-8-common-quality/8-59-availability-costs-allocated-to-generators-and-hvdc-owner.

9 18 August 2020 Electric Power Optimization Centre, "Consultation on UTS Preliminary Decision" p. 3 https://www.ea.govt.nz/code-and-compliance/uts/undesirable-trading-situations-decisions/10-november-2019/.

counterfactual power prices in 2017, and therefore does not cover the alleged UTS period. Therefore, his results are of limited relevance in the present context except to show that SRMC-based pricing is not the market norm.

36. Consequently, Prof. Philpott provides a general critique of bidding behaviour in the market against an "ideal" and unattainable benchmark based on an analysis of market behaviour from three years ago. Observing sometimes significant deviations between the observed and ideal outcomes, he appears to suggest that there are broader competitive issues that need to be addressed in the New Zealand power market. As we stated previously, a UTS investigation is an ineffective way to implement market design changes. If the Authority agrees with Prof. Philpott, and wishes to alter market behaviour, it should conduct an open process to investigate potential changes to the market rules so that the costs and benefits can be properly assessed.

37. As he appears to admit, Philpott's SRMC benchmark is not consistent with a "workable" competition standard where there can be deviations from short-run marginal cost pricing.[10] In a model based on SRMC bidding, marginal generators risk not covering their capacity costs, implying that the market cannot sustain consistent bidding at that level without risks to investment, the viability of generators, and security of supply. For this reason and others described above, the SRMC benchmark is not well suited to providing a counterfactual for assessing competitive behavior in energy-only markets like New Zealand where there is no separate mechanism for the recovery of capacity costs.

38. As a practical matter, a hydro generator such as Meridian is very unlikely to derive the same valuation for water as that obtained by Philpott, and on a forward-looking basis, it is difficult to predict the future distribution of market prices under a price-taking assumption for a generator the size of Meridian.

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[10] From 18 August 2020 Electric Power Optimization Centre "Consultation on UTS Preliminary Decision" (p. 3):

> Perfect competition in markets is often claimed to be an unrealistic standard by which to judge wholesale electricity markets, to be replaced by a standard of "workable" competition. The latter standard unfortunately is difficult to measure or assess and is open to interpretation. Perfect competition, although arguably unattainable in practice, is a computable benchmark against which market participant behaviour can be assessed.

That would be an unrealistic performance threshold upon which to assess whether Meridian is engaging in undesirable trading behavior.

39. Prof. Philpott's modeling approach also has the same limitations as Haast's approach. Prof. Philpott fails to demonstrate that his simulation model can accurately replicate actual market outcomes in terms of generation output by individual plants, resource consents and other regulatory limitations, and the resulting water reservoir conditions and river flows.

V. Concluding remarks

40. In this submission we have primarily responded to a key theme in the cross-submissions of several other parties, in particular Haast Energy (along with other independent energy retailers) and Professor Philpott, concerning the standard to use in assessing the competitiveness of generator offers in New Zealand's electricity market. We have explained that the perfect competition standard used by Haast Energy and Professor Philpott is not the correct counterfactual in the New Zealand market context. This is because the design and regulation of the New Zealand electricity market require the Authority to aim for the attainment of long-term efficiency within a workably competitive market framework.

41. As we have explained in this and our previous submission, the workable competition paradigm has a long-term efficiency focus, allowing prices to deviate from SRMC without compromising the goal of long-run efficiency. We have accordingly pointed out that the perfect competition assumption used in models employed by Haast Energy and Professor Philpott is not the correct approach for estimating a workably competitive market counterfactual.

42. As explained at greater length in our previous submission, and reiterated here, there are alternative approaches to the New Zealand market design that have been employed in other energy-only electricity markets. The regulators of the ERCOT and AESO energy-only markets allow prices to increase above SRMC to reflect scarcity as well as competitive trading circumstances. Both markets employ price caps, and ERCOT also applies an ex ante screening mechanism used to trigger market power mitigation. Both these markets aim for long-run efficiency whilst allowing generators to recover their capacity costs.

43. If the Authority wishes to force generators in the New Zealand electricity market to bid their SRMC, then the correct approach to achieving this aim is through changes to market design and trading arranagements. This is best achieved through open consultations with market participants. Such an approach would provide market participants with greater certainty over the rules for generator conduct. It is also preferable to using an ad-hoc UTS investigation to bring about lasting changes to the bidding behaviour of generators.

NORTH AMERICA | EUROPE | ASIA-PACIFIC

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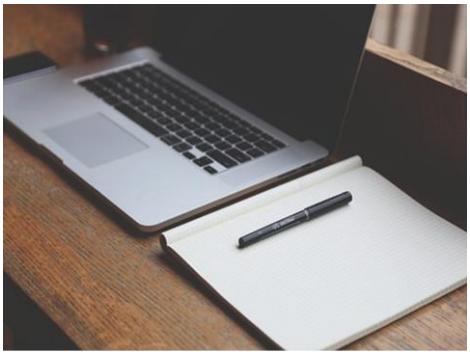
Cross submission: UTS preliminary decision

Kieran Murray

8 September 2020



Contents

About the author

Kieran Murray provides expert evidence, testimony and reports in the fields of regulation, competition analysis and public policy, including market design. He has served as an economic consultant on these matters for public agencies and private companies in over 15 countries in the Asia Pacific Region. Kieran co-founded and jointly leads Sapere. He is an expert lay member of the New Zealand High Court and serves as an International Arbitrator for the PNG Independent Consumer and Competition Commission.

Prior to his consulting career, Kieran was instrumental in establishing the (former) wholesale electricity market operator, EMCO; he was responsible for the design and implementation of the wholesale electricity market, NZEM, which went live in October 1996. After leaving EMCO, Kieran held leading roles in projects to advance the market design, including with the Electricity Governance Establishment Project and the Grid Security Project. His expertise in electricity market reform is recognised through subsequent engagements to advise on electricity market institutions and design in Australia (east and west coast markets), Canada, Columbia, the Philippines, Singapore, south-eastern United States, Vietnam, and several Pacific Island nations.

Introduction

1. I have read the submissions received by the Electricity Authority (Authority) on its preliminary Undesirable Trading Situation (UTS) decision. None of the submissions cause me to want to change the analysis I set out in my submission (Murray, 2020). There are some supplemental comments I would like to make in response to the submissions made to the Authority. In this cross submission, I comment on five topics raised in those submissions. These topics are:

   - outcomes consistent with underlying supply and demand
   - perfect or workable competition standard
   - impacts on consumers from generators structuring offers to manage constraints
   - opportunity cost
   - competition is an issue of market design.

Outcomes consistent with underlying supply and demand

2. Several submitters pick up on the references by the Authority, in its preliminary decision, to whether the outcomes it observed reflected "underlying supply and demand" conditions. In describing its approach, the Authority stated that (Electricity Authority, 30 June 2020, p. ii):

> The Authority considered that if wholesale market outcomes reflect supply and demand conditions, then there is no reason for confidence or integrity to be undermined. Conversely, if spot market outcomes vary widely from the underlying supply and demand conditions, then confidence or integrity may have been undermined and a UTS might have developed.

3. New Zealand Steel agreed with the framework adopted by the Authority and drew attention to the paragraph just quoted (New Zealand Steel Limited, 2020, p. 1). The seven applicants also agreed with the logic of the Authority comparing outcomes with underlying supply and demand conditions (Ecotricity, et al, 2020, p 9), as did Genesis (Genesis Energy Limited, 2020, para. 1).

4. However, the difficulty with the test endorsed by these submitters is that outcomes from supply and demand conditions in wholesale electricity markets are not measurable in a vacuum. In markets with any degree of complexity, market outcomes are a function of the market rules. As Coase observes (Coase, 1988, p. 9):

> All exchanges regulate in great detail the activities of those who trade in these markets (the times at which transactions can be made, what can be traded, the responsibilities of the parties, the terms of settlement, etc.), and they all provide machinery for the settlement of disputes and impose sanctions against those who infringe the rules of the exchange. It is not without significance that these exchanges, often used by economists as examples of a perfect market and perfect competition, are markets in which transactions are highly regulated (and this is quite apart from any government regulation that there may be). It suggests, I think correctly, that for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed.

5. The relevant underlying supply and demand conditions are, therefore, not just the physical conditions of production and consumption, but also the rules governing the rights and duties of those carrying out transactions (Coase, 1988, p. 10). The incentives created by the market rules are as inherently an element of the underlying supply and demand conditions as the incentives created by changes in fuel supplies.

6. However, in its test, the Authority sought to compare observed outcomes with the outcomes it might expect from an unspecified trading forum that may have very different trading rules to the current market (and may not reflect any real-world market as discussed further below). Such a test cannot distinguish whether the observed outcomes result from an unforeseen or exceptional situation disrupting normal trading, from market design characteristics, or are the expected results of underlying supply and demand conditions properly defined to include the existing market rules.

Varying from perfection is not a UTS

7. Professor Andy Philpott, Electric Power Optimisation Centre, explains that the Authority "compares observed generator behaviour with what would be expected in a perfectly competitive market" (Philpott, 2020, p. 3). Professor Philpott argues that perfect competition, although arguably unattainable in practice, is a computable benchmark against which market participant behaviour can be assessed. He says that workable competition is difficult to measure or assess and is open to interpretation (Philpott, 2020, p. 3).

8. The Authority's reasoning ought to be as objective, rigorous and transparent as feasible, but a computable benchmark is not a necessary foundation for a UTS assessment. Adopting a perfect competition standard, as the Authority did, may have simplified its modelling but it also introduced material bias into the Authority's assessment of whether a UTS arose.

9. This bias is introduced because the economic theory of perfect competition is not intended to describe real world markets. Rather, it establishes the formal structural conditions for certain theoretical equilibrium outcomes associated with allocative efficiency.[1] In this equilibrium, all firms earn a normal rate of return and resources are efficiently allocated, such that there is no incentive for anything to change and hence the process of competition almost ceases to exist (Hayek, 1948). Firms in a perfectly competitive equilibrium do not alter their prices, do not advertise or differentiate their products or attempt to reduce their costs or innovate. The Authority appeared to recognise these characteristics of the perfect competition concept when it interpreted competition in its statutory objective as meaning workable competition (Electricity Authority, 2011).

10. Critically, a perfect competition standard in which generator offers are limited to some view of cost dispenses with the price discovery role of the wholesale market. The wholesale market would be viewed through some narrow lens focused on efficient dispatch and would not offer

[1] Essentially, for perfect competition these conditions are homogeneous products, an infinite number of buyers and sellers, the absence of economies of scale, independence of action, perfect information and free movement of resources.

any substantial advantage over a more centrally planned approach because economic costs would be assumed to be known, or calculable, in advance. However, efficient economic costs are revealed in the process of price discovery; they are not something that can accurately be determined ex ante for the simple reason that the information required will not be fully available ahead of the price determination process (Yarrow & Decker, 2014). The effectiveness of this process of price discovery is a matter of market design, as discussed further below.

11. A simple example might help illustrate the difference in concepts. Prices in auction-based markets, such as the New Zealand wholesale electricity market, can generally be expected to orbit the offer prices of *second-lowest* cost source of production to meet demand, not the costs of the least cost producer as assumed with perfect competition standards. For example, if three suppliers could each supply one unit at (some definition of production) cost of $55, $60, and $65 respectively, and a single buyer seeks to purchase one unit, competition might be expected to drive the price down to just under $60, say $59.99, as that is where the competition stops.[2] Comparing this market outcome against the first supplier's unit cost of $55 does not inform an assessment of whether the market is operating normally or has become disrupted, because the benchmark of perfect competition does not describe the expected outcomes in such an auction.

12. In real world markets, prices and economic costs that do not vary with production—scarcity rents, premiums for risk, some forms of opportunity cost etc—are jointly and simultaneously discovered or determined via the competitive process. These prices and costs depend on all aspects of underlying supply and demand, including rivals' expectations of others' expectations in infinite regress. Whether the forms of economic rent earned by any plant that is marginal in a particular pricing period or periods are efficient can only be answered over time, extending out for many years or potentially decades—that is, if the net present value of prices (including economic rents) turns out to equal the LRMC of new capacity.

13. A second reason why the Authority's test is biased is that from the viewpoint of standard economic theory, the rules governing wholesale markets for electricity are inherently incomplete. Some incompleteness is inevitable because electricity is a flow, rather than a stock (Wilson, 1999, p. 1). Because electricity is a flow, a property right cannot be assigned by title, and without clear property rights, market transactions cannot arrive at perfectly competitive outcomes. No one owns electricity per se—some entities own generation plant and transmission lines, but these properties are not traded in the wholesale electricity market. Rather, market participants approved by the Authority obtain privileges to inject or withdraw power from the transmission grid at specific locations. These privileges bring obligations to comply with technical rules and procedures for settling accounts based on metered injections and withdrawals. Further, flows on transmission lines are constrained continuously by operational limits and generators must comply with environmental factors and other limitations, and these operational limits and environmental constraints are not all set simultaneously under

[2] Similarly, when multiple buyers bid for a single item, the bidding stops at the price at which the second-last bidder drops out; that is, the price paid by the winning bidder is the second highest of the bidder valuations—the value of the item to the winner is not revealed in the auction, just as the cost of the lowest cost producer is not revealed. For an expanded version of these examples in the context of the Japanese fish market at Tsukiji and auctions for art work and literature, see McMillan, 2002, pp. 65-71.

current market arrangements;[3] therefore, market outcomes cannot reflect outcomes from perfect competition other than by coincidence. The Authority's test meant it assessed observed outcomes against an unobtainable standard.

Consumer benefit of offers to manage constraints

14. In applying its perfect competition standard, the Authority also appears to assume that participants, other than the South Island generators, would behave in ways not consistent with experience. In his submission, Neil Walbran queried the Authority's assumption that if the HVDC had bound, "a competitive response from North Island generators would more than likely lower prices, benefitting North Island consumers'' (Neil Walbran Consulting, 2020, p. 2). In arriving at its preliminary view, the Authority argues that "SPD will efficiently allocate capacity between generation and reserve *provided offers reflect marginal costs*" (emphasis added) (Electricity Authority, 30 June 2020, p. 59). Professor Philpott assumed that reserve was offered at zero cost (Philpott, 2020, p. 4).

15. Mr Walbran presents a brief survey of prices across the HVDC from 2010 to early 2020 (Neil Walbran Consulting, 2020, p. 4). This data shows that there have been instances of very high North Island prices when the HVDC constraint binds. Mr Walbran's quick look at the data (he describes as random samples) shows the assumption by the Authority that North Island reserve providers would offer at marginal cost—the perfect competition standard adopted by the Authority—is wrong.

16. Mr Walbran argues (rightly in my view) that offer strategies by South Island generators to prevent the constraint binding suggests:

> … there can be a lack of competitive pressure on North Island prices when the HVDC northward constraint binds. Their offer strategy is in response to these prices and provides additional competitive tension (on both spot prices and the available risk management tools).

17. The samples provided by Mr Walbran support the conclusion presented in my submission: offer strategies that prevent constraints from binding can smooth prices across regions compared to what would occur if the constraints bind; this price-smoothing effect can increase consumer surplus because consumers may benefit more from lower peak prices than they are harmed by higher prices in regions where prices would otherwise fall.

Opportunity cost is determined by choice

18. Energy Link points out an unsupported leap in the Authority's reasoning. The Authority argues that when a generator is spilling the opportunity cost of water is nil; it claims that offers should, therefore, reflect only the marginal operating costs of hydro electricity generation. However, as

[3] Transmission constraints are modelled simultaneously but by using approximations; resource consent terms may have been set many years previously and are not adjusted continuously as would be assumed under perfect competition.

Energy Link observes, in a workably competitive market, generators (as with any supplier) could be expected to price based on their assessment of their opportunity cost, and that the value of water at a given moment in time is not the only element of opportunity cost.

19. Nobel Laureate James Buchanan expresses the concept of opportunity cost as follows (Buchanan, 2008):

> Opportunity cost is the anticipated value of 'that which might be' if choice were made differently. Note that it is not the value of 'that which might have been' without the qualifying reference to choice.

20. As the quote emphasises, opportunity costs exist in the context of the decision or choice being analysed. For generators preparing offers, opportunity cost takes in all of value of that which might be if an alternative offer was made, not just what might be done with the water. As discussed above, these opportunity costs include economic costs that are determined jointly and simultaneously with prices. Opportunity cost to a generator includes the impact of a clearing offer on the market price and accordingly on revenue from inframarginal quantities. Mr Walbran and Energy Link both identify potential costs that a generator would consider as part of its opportunity cost. The Authority conflates opportunity cost of water with the opportunity cost of offers, and they are not the same in workably competitive markets.

Competition is a market design issue

21. Genesis submits that "the 2009 Ministerial Review agreed with the general view among international experts that restructuring of generation usually has the best potential to strengthen competition" (Genesis Energy Limited, 2020, para. 17). Genesis does not provide a citation for its claimed general view of international experts; the view as stated by Genesis does not accord with the published literature.

22. It is the case that competition agencies will sometimes use market concentration as an imperfect indicator when forming preliminary assessments of the strength of competition in a given market. However, such assessments are done with caution since there is an ambiguous relationship between the structure of a market and the intensity of competition within that market. The structure conduct performance hypothesis attributed to Bain (1951) has long since been successfully challenged by Baumol's (1982) contestability theory, Sutton's (1991) work on sunk costs, and Demsetz's (1973), (1974) arguments on the direction of causality.

23. The Australian Competition Tribunal in its decision to authorise AGL Energy to acquire Macquarie Generation addresses, at some length, the point that industry structure does not determine competitive pressure (Application for Authorisation of Macquarie Generation by AGL Energy Limited, 2014):

> There is nothing inherently wrong with a market in which three large firms compete vigorously for market share where there are incentives to steal customers away from rivals. It is behaviour that matters, not structure per se. It appears to the Tribunal that it has been invited to assume that the "Big 3" will not constitute a competitive market principally on the basis of their combined market share immediately post-acquisition on

> an assumption that competition between them would become muted over time. In the opinion of the Tribunal, oligopolies should not be thus prejudged.

24. McMillan (2002, pp. 74, 88) observes in his natural history of markets that competition does not just happen in markets with any degree of complexity. Creating conditions for active competition is one of the main tasks of market design. Almost all rules impact on competition in some manner because all rules affect behaviour relative to what might occur under a different rule. However, two examples might illustrate the point that competition is a market design issue, not a structural issue.

25. When the New Zealand wholesale electricity market was introduced in 1996, almost any kind of offer mechanism was likely to work better than the centralised monopoly control of generation that preceded the wholesale market. But as the voluminous literature on auction theory attests, some kinds of auctions work better than others in delivering long-term benefits to consumers. Since 1996, there has been a global natural experiment in wholesale electricity market design—the Association of Power Exchanges lists members from over 30 countries.[4] There has also been a burgeoning of electronic auctions as markets have been created in front of us as entrepreneurs devised new ways of transacting—TradeMe, for instance, was founded three years after the wholesale market began trading. Trading platforms have advanced substantially; in 1996, the wholesale electricity market operator, M-co, imported specially the largest desktop computer available short of a mainframe to operate the pricing software; now that software operates on a laptop.

26. Yet, despite all of this learning and technological development, the core offer rules in the wholesale market are largely unchanged from those designed in 1996. It could be that rules designed in a different era (at least in terms of information technology) remain state of the art; more likely, opportunities to enhance the market design to promote competition for the long-term benefit of consumers have not been picked up, perhaps as regulators addressed other priorities.

27. The second example, illustrating the point that competition is a market design issue, is that the surest route to enhanced competition is the arrival of new firms. Barriers to entry to the wholesale electricity market are primarily a market design issue, as the Code specifies the entry requirements. A current example is that the Authority was convinced soon after its formation in 2010 that the existing transmission pricing methodology "acts like a tax on generation in the South Island" (Electricity Authority, 10 June 2020). The Authority has recently decided to reduce this barrier to entry, but will still take several years to effect that decision (Electricity Authority, 10 June 2020).

Conclusion

28. The requirements and incentives created by the market rules are as inherently an element of the underlying supply and demand conditions as the incentives created by changes in fuel supplies,

[4] The Association's website advises that it was formed to facilitate development and communication of ideas and practices in the operation of global competitive electricity markets: https://theapex.org/

when assessing whether normal trading was disrupted by an unforeseen or rare event; that is, when assessing whether a UTS arose.

29. However, in its test, the Authority sought to compare observed outcomes with the outcomes it might expect had South Island generators offered in a manner consistent with perfect competition. Such a test cannot distinguish whether the observed outcomes result from a disruption to normal trading, from market design characteristics, or are the expected results of the existing market rules.

30. None of the submissions provide evidence or analysis to disturb my conclusion—in my submission on the Authority's preliminary decision—that normal market operations continued without interruption during the period investigated, and therefore that no UTS arose.

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For more information, please contact:

Kieran Murray
Phone: +64 4 915 7590
Mobile: +64 21 245 1061
Email: kmurray@thinkSapere.com

Wellington	Auckland	Sydney	Melbourne	Canberra
Level 9 1 Willeston Street PO Box 587 Wellington 6140	Level 8 203 Queen Street PO Box 2475 Shortland Street Auckland 1140	Level 18 135 King Street Sydney NSW 2000	Office 2056, Level 2 161 Collins Street GPO Box 3179 Melbourne 3001	PO Box 252 Canberra City ACT 2601
P +64 4 915 7590 F +64 4 915 7596	P +64 9 909 5810 F +64 9 909 5828	P +61 2 9234 0200 F +61 2 9234 0201	P +61 3 9005 1454 F +61 2 9234 0201 (Syd)	P +61 2 6100 6363 F +61 2 9234 0201 (Syd)

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independence, integrity and objectivity

Russell McVeagh

14 September 2020

Jason Woolley, Sam Fleming
Meridian Energy Limited
PO Box 10840
WELLINGTON 6143

By email

Dear Jason, Sam,

1. You have asked us to review the submissions made to the Electricity Authority in response to its Preliminary Decision on a claim of an undesirable trading situation dated 30 June 2020 ("**Preliminary Decision**").

2. As part of that review, we have identified the following areas of concern:

   (a) Some submitters invite the Authority to take into account irrelevant considerations. As Meridian identified in its submission, the Authority is undertaking a quasi-judicial function when investigating a UTS. It can only consider information that is probative of whether a UTS occurred.

   (b) The Authority has misinterpreted the effect of clause 5.1A of the Electricity Industry Participation Code 2010 ("**Code**") in the Preliminary Decision. That misinterpretation, however, did not impact the Preliminary Decision as the Authority only considered a UTS to have occurred within the ten working day time limit. Other submitters, however, now seek to extend that preliminary UTS outside the time limit. The Authority cannot lawfully do so.

   (c) The complainants submit that the Authority should consider allegations of a breach of the Commerce Act 1986. The Authority can consider breaches of the law.[1] The submission, however, fundamentally misconceives the law in question.

Relevant and irrelevant considerations

3. In undertaking a UTS investigation, the Authority is acting as an adjudicative body. It must answer the specific question before it, did a UTS arise, without

[1] Code, cl 5.1(2)(c).

consideration of factors that are not probative of anything that determines that question.

Environmental considerations

4. Genesis and other submitters suggest the Authority should consider environmental impacts of the conduct in question in determining whether a UTS occurred.[2] They do not, however, explain how those considerations could have any impact on confidence in, or the integrity of, the wholesale market. We are of the view that environmental impacts of market actions are an irrelevant consideration in a UTS investigation.

5. A UTS investigation considers whether the confidence in, or integrity of, the wholesale market is or may be threatened. In considering that test, the Authority acts as a judicial decision-maker. It cannot further its strategic ambition in relation to kaitiaki and environmental concerns through application of its judicial function in UTS investigations.[3]

6. There is simply no plausible link between CO_2 being emitted and wholesale market confidence or integrity. Accordingly, environmental concerns cannot be a relevant consideration in determining a UTS investigation. It appears that the Authority, correctly, did not consider these concerns in its Preliminary Decision, notwithstanding their inclusion in the initial complaint.[4] Any change to that approach in the Authority's final decision would amount to it wrongly taking into account an irrelevant consideration.

Purpose

7. Haast, OJI + Independent retailers' ("**complainants**") submit that the purpose of Meridian's actions are relevant to the UTS investigation. Specifically, that Meridian's alleged purpose to avoid transmission constraints binding is relevant to a UTS investigation.[5] Again, there is no explained link between the purported purpose of Meridian's actions (which, even if it were accurate, would only amount to an allegation of normal market conduct) and the test for a UTS.

8. As the Authority has noted previously, a UTS is a notorious event that will be noticed quickly by market participants.[6] Such a situation must be sufficient to impact the confidence in, or integrity of, the wholesale market. A participant's purpose could be relevant to whether such a situation occurred (for instance in relation to the examples in cl 5.1(2)). A participant's purpose for, say, entering hedges might be relevant if it was being done because of a loss of confidence in

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2 See *Haast, OJI + Independent retailers' UTS preliminary decision submission* at 22-23; *Genesis UTS preliminary decision submission* at [48]–[57].

3 *Haast, OJI + Independent retailers' UTS preliminary decision submission* at 22.

4 Preliminary Decision at [4.2(f)].

5 *Haast, OJI + Independent retailers' UTS preliminary decision submission* at 21.

6 Electricity Authority *Decision Paper: Review of the Undesirable Trading Situation Provisions in the Code* at [4.7.4]–[4.7.5].

the market. However, the Authority can only consider the purpose of a participant's actions if, and to the extent, it is demonstrated to be relevant to the test for a UTS. The complainants have failed to do so here.

Limitation period

9. The Authority misinterpreted cl 5.1A of the Code. Properly construed, cl 5.1A precludes a finding of a UTS at any time prior to the 10 business days immediately preceding the commencement of the Authority's investigation of a UTS.

10. Clause 5.1A provides that 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."

11. The Authority considered cl 5.1A had "no other effect" than impacting when the Authority may *begin* a UTS investigation.[7] The Authority began an investigation on 13 December 2020, having received a complaint on 12 December 2020. It considered that cl 5.1A had therefore been satisfied and the clause had no further impact on the timeframe of activity it could consider as it started an investigation within 10 business days of receiving the complaint.[8] Crucial to this interpretation was the ongoing nature of the UTS alleged. The complainants rely on this reasoning to submit that a UTS occurred from 10 November 2019 until 16 January 2020.

12. The proper interpretation of cl 5.1A, however, precludes the Authority from finding a UTS "occurred" any earlier than ten working days prior to the commencement of the Authority's investigation.

13. The Authority's interpretation in its Preliminary Decision allows perverse outcomes. On the Authority's approach, provided the complainant alleges an ongoing situation, the Authority is licensed to retrospectively investigate that situation, however historical it may in fact be. In this way, how a claimant frames their allegation determines the jurisdiction of the Authority. That cannot be right.

14. The Authority's interpretation also involved an unduly literal reading of cl 5.1A. In applying that reading it failed to take into account the purpose and context of the rule, as it was required to do.[9]

15. The purpose of a rule can be informed by its history. Clause 5.1A was proposed in its present form by the Authority.[10] The Authority's views on the proposal at inception support the limitation period's operation as (at a minimum) a time limit

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7 Preliminary Decision at [9.2].

8 Preliminary Decision at [9.3].

9 See Interpretation Act 1999, s 5; and *Commerce Commission v Fonterra Co-operative Group Ltd* [2007] 3 NZLR 767, [2007] NZSC 36 at [22].

10 Electricity Authority *Consultation Paper: Review of the Undesirable Trading Situation Provisions in the Code*.

between the relevant events capable of supporting a UTS finding and the commencement of the Authority's investigation. Indeed, in its strongest form, the Authority's own view of its limitation period could be read as precluding *any* investigation once 10 business days have passed from the *commencement* of a UTS (which, if the complainants are correct as to the 10 November commencement of the UTS, would in fact prevent *any* investigation by the Authority in this case):[11]

> … the Authority considers that it is more appropriate for the time limit on initiating a UTS investigation to start from the date that an alleged UTS commenced. This would mean that the UTS provisions could not be triggered if a UTS was first discovered after the time limit expired. While a scenario of this type cannot entirely be ruled out, it appears very unlikely that a situation which threatens or may threaten confidence in, or the integrity of, the wholesale market, could go unnoticed for a long period.

16. The Authority further explained that a short limitation period was appropriate in the context that "any situation that meets the test of being a UTS is extremely unlikely to go unnoticed for any extended period".[12] All prior UTS allegations had been lodged within "hours or days of the relevant triggering contingency or event".[13] Such quick reaction is consistent with a market that prices in 30 minute windows.

17. A short limitation period (and correspondingly short period capable of investigation/finding of a UTS) is also consistent with the purpose of the UTS regime as a whole, which is to urgently restore proper market operation.[14]

18. A short limitation period is also consistent with the High Court's view that a UTS will typically be "'one off' events of relatively short duration" because longer running situations are unlikely to be properly conceived of as a UTS.[15] Such long running situations would be appropriate for the Code change process, as the Authority recognised in its Decision Paper:[16]

> 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

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11 At [3.1.39] see also [3.1.42]–[3.1.43].

12 At 3.1.42.

13 At 3.1.42.

14 See cl 5.5.

15 *Bay of Plenty Energy Limited v the Electricity Authority* HC Wellington CIV-2011-485-1371, 27 February 2012 at [218].

16 Electricity Authority *Decision Paper: Review of the Undesirable Trading Situation Provisions in the Code* at [4.6.4](c).

19. The proper interpretation is that once an investigation is launched, the Authority can only consider whether a UTS "occurred" in the immediately preceding ten business days. If the alleged UTS is alleged to have begun earlier than those ten business days, the Authority cannot make findings of a UTS in respect of that prior period.

20. This interpretation of the Code, which is consistent with the purpose and context of the UTS regime, is also supported by the relevant jurisprudence in respect of the limitation provision in s 80(5) of the Commerce Act, which is framed in a materially identical way. There, conduct that "arose" more than three years ago (where the limitation period was three years) has been held not to be capable of being the subject of Commerce Commission proceedings, notwithstanding a situation where the ongoing conduct had continued so that some of it occurred within the three year limitation period.[17] Only the conduct falling within the limitation period was potentially prosecutable, despite the ongoing conduct itself spanning both before and after the three year cut-off.

21. For all the above reasons, the Authority's view that cl 5.1A had "no other effect" than limiting when it might "*begin* an investigation" is wrong.[18]

22. Accordingly, submitters are wrong to seek to expand the time period for consideration of whether a UTS occurred before the ten business day period immediately preceding the commencement of the Authority's investigation. The limitation period precludes findings of a UTS for those earlier periods.

No misuse of market power

23. The complainants' submission suggests that the Authority's investigation could be "supported and strengthened" by considering whether Meridian had misused its market power, with that apparent breach of s 36 of the Commerce Act used to evidence a UTS.[19] As the Authority is aware, the Commerce Act is enforced by the Commerce Commission not the Electricity Authority. It is not clear how an allegation of misuse of market power is in any way relevant to whether confidence in, or the integrity of, the wholesale market has been threatened.

24. The complainants' submission exhibits a fundamental misunderstanding of the scheme of the Commerce Act, and its relationship to the Code. For example, the complainants' submission confuses the statutory tests for the cartel prohibitions (which, contrary to the complainants' submission, are not concerned with any lessening of competition) and s 36 (which, contrary to the complainants' submission, is not a purpose and effects test, but solely considers the defendant's purpose). [20]

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17 *Commerce Commission v Koppers Arch Wood Protection (NZ) Ltd* [2007] 2 NZLR 805 (HC) at [58]–[59].

18 Preliminary Decision at 9.2 (emphasis in original).

19 Haast, OJI + Independent retailers' UTS preliminary decision submission at 21.

20 At 21.

25. Whether Meridian has market power and, if so, whether it "misused it" in December 2019, is a separate question to whether confidence in, or the integrity of, the wholesale market has been threatened. However, for the avoidance of doubt, there is no reasonable basis on which to assert that Meridian's conduct breaches s 36 of the Commerce Act:

(a) s 36 only applies to businesses with a "substantial degree of market power". The Commission has previously found that the wholesale market should be defined on a national basis.[21] Meridian faces vigorous competition from Mercury, Genesis, Contact, Trustpower and a number of others in that national market, and was not acting "substantially unconstrained by competitive pressures"[22] during December 2019;

(b) the prohibition requires a "taking advantage" of a substantial degree of market power for an anticompetitive purpose. The Courts have found that "taking advantage" means that if Meridian could have engaged in identical conduct if it did not have market power, there is no breach of s 36.[23] The fact that two other generators (Genesis and Contact) were independently engaged in similar conduct in response to unprecedented conditions in the lower South Island, is in and of itself evidence that Meridian's conduct did not constitute a "taking advantage" of any alleged market power; and

(c) Meridian was not acting with any of the proscribed purposes listed in s 36(2) of the Commerce Act. As set out in Meridian's submission in response to the Authority's preliminary decision, the purpose of Meridian's conduct in December 2019 was to manage the entirely unprecedented level of rainfall safely, and mitigate the risks to communities, property, and structures in its catchments. Meridian's offers were within normal parameters of the market, and consistent with past analogous periods. Even if those prices exceeded the Authority's expectations they were not high, and in any event the Courts have previously recognised that an anti-competitive purpose cannot be inferred from high prices alone.[24]

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21 Investigation Report: Commerce Act 1986, s 27, s 30 and s 36 Electricity Investigation (22 May 2009).

22 *Commerce Commission v Telecom Corp New Zealand* [2010] NZSC 111, [2011] 1 NZLR 577 at [33].

23 At [31].

24 *Telecom Corp of New Zealand Ltd v Clear Communications Ltd* [1995] 1 NZLR 385 (PC) at 406–409.

26. We would be pleased to respond to any further questions Meridian may have in relation to the above advice.

Yours faithfully
RUSSELL McVEAGH

Chris Curran | Sarah Keene
Partners