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A highly competitive electricity market is key to successfully unlocking a 100% renewables future

Electric Kiwi and Haast Energy Trading (Haast) consider that 100% renewables is achievable and an important part of New Zealand's journey to becoming a zero-carbon economy. We welcome and support the MDAG's work on the 100% renewables project and the emphasis the Authority gave to the MDAG project in its recent EDSI Select Committee presentation.

Given the heavy over-lap between the 100% renewables project, the 2021 dry year review, wholesale market review (WMR) and other related Authority projects, we have included our recent dry year and WMR submissions as part of our MDAG submission.¹

Electric Kiwi and Haast support preservation of the wholesale electricity market

We agree with MBIE that "The New Zealand Electricity Market ... remains the best model for delivering the outcomes expected from the sector". We want the wholesale electricity market to fully deliver the competitive outcomes it was set up and originally designed to enable.

We also agree with MBIE's warning that the electricity sector needs to "maintain its social license to operate" and "If people lose trust in the market and market participants, perhaps because of pricing or reliability, then the political process may explore alternatives to the current market. Such alternatives exist and are being used in other jurisdictions".² The sustainability and durability of market settings requires that where there are market or regulatory failures they are addressed in a commensurate and timely manner. Regulatory stability arguments are a fig-leaf against medium to longer-term durability and market sustainability risk.

Paragraph 3.38 of the MDAG paper lays out well what is needed to ensure that the current energy-only market settings work well. The capacity market options would not address the current competition problems in the market or, the issue MDAG identified, that competition could get weaker. We consider that the capacity market options are a solution for the wrong problem.

Undertaking market design work is important to prepare for high levels of renewables

As flexible thermal generation retires the remaining flexible plant (hydro) will have even more market power. Although batteries may bring some competition with regards to short-term storage, hydro will be the only game in town with regards to medium and long-term storage. This makes the current market position of Meridian, in particular, untenable. This is further reason for the Authority to prioritise the structural solutions under consideration as part of the WMR.

Getting the foundations of a competitive wholesale market right should be the highest priority of the Authority in preparing for a 100% renewables market. On top of structural reform of Meridian, this should include increasing monitoring and enforcement of trading conduct and a significant tightening of wholesale market

¹ The commentary in our dry year submission heavily overlaps a lot of the MDAG's thinking in the 100% renewables project.

² MBIE, Investigation into electricity supply interruptions of 9 August 2021, 2021: <https://www.mbie.govt.nz/dmsdocument/17988-investigation-into-electricity-supply-interruptions-of-9-august-2021>



information disclosure rules. The recent abysmal industry survey results show confidence in the wholesale market has been undermined by sustained exercise of market power. Urgent action is necessary.

We agree demand-side participation will be important in managing short-term risks. We encourage the Authority to consider schemes which may kick start this part of the market such as the ARENA's residential demand response program, and AEMO's Reliability and Emergency Reserve Trader (RERT) schemes in Australia, and the Demand Response program of Singapore. Providing stronger initial incentives for parties to invest in demand response will derisk the delivery of large volumes of demand response by the end of the decade.

Summary of Electric Kiwi and Haast's views

We reiterate the following from our 2021 dry year risk submission:

- **Efficient management of dry years/scarcity requires: (i) prices which reflect genuine scarcity only; and (ii) market participants have tools available to efficiently manage dry year risk.** Problems with significant or substantial market power in the wholesale market resulting in artificially high spot prices are well telegraphed in the Authority's wholesale market review, while problems with hedging arrangements have been extensively detailed by independent retailers, including in the Electricity Price Review.
- Market arrangements that rely on high prices to (efficiently) signal scarcity can be put at risk if prices also reflect the exercise of significant market power, and if prices rise to levels well above that justified by market conditions/scarcity of supply.
- **Market power problems harm the wholesale electricity market's ability to efficiently manage dry year risk:** The [100% renewables], dry year and wholesale market reviews should not be conducted in isolation of each other.
- **Meridian's size and market power means how well dry year risk [scarcity] is managed depends on its commercial decisions and judgement:** Meridian's WMR submission (including Meridian's consultant reports), if taken at face value, indicates Meridian adopts a "conservative" approach to storage management – which is more conservative than its competitors such as Genesis – and this can explain why spot prices were so high in 2021 (and adjoining years).

What can be taken from the Meridian submission is that the market outcomes in 2021 were not simply a function of price discovery or the multiple competing suppliers making individual judgements about the dry year situation in a workably competitive market. Rather Meridian's significant market power meant it was able to raise prices in 2021, and the efficiency of dry year management was a function of Meridian's judgements. If Meridian gets it wrong, New Zealand gets it wrong. Meridian's structural dominance means it dictates outcomes when trade-offs are required between its commercial position and market efficiency and security of supply.

- **Implications of the structure of the market and, specifically, Meridian should be considered:** The Authority should specifically consider the impact of Meridian's size, and control over water storage in the market. Meridian controls half of all hydro storage in New Zealand, and because most of the stored energy in Lake Tekapo enters the electricity market via Meridian's hydro fleet, Meridian is the beneficiary from a large majority of the stored hydro energy in New Zealand.

Additionally:

- The open candour with which Meridian has discussed what it considers to be acceptable behaviour and that dry year spot pricing is a function of its own commercial decisions and judgement, highlights the challenges the Authority/MDAG face for the conditions for an energy-only market to properly work to be met, including that: "(a) Prices that reflect real supply and demand conditions, including very high prices in times of scarcity" and "(b) Confidence among wholesale buyers and sellers that the high prices make



sense, (which means confidence in the structure and rules of the market, including the sufficiency of competition)".

The 100% renewables project is not being conducted in a policy vacuum

Efficient management of dry years requires: (i) prices which reflect genuine scarcity only; and (ii) market participants have tools available to efficiently manage dry year risk. It is appropriate (high) prices signal scarcity, but this is undermined where market participants and consumers don't have confidence that heightened prices reflect genuine scarcity rather than (or as well as) significant or substantial market power.

These issues are well telegraphed in the Authority's wholesale market and dry year reviews, and the results of the UMR survey.

For example, we agree with the Authority WMR finding that "There is some evidence of an increased incentive and ability for electricity generators to structure their offers into the market in a way that keeps prices high (economic withholding)" and there is "evidence to suggest that prices may not have been determined in a competitive environment".³

The Authority's comment, in the dry year review, that "the role of higher prices is recognised as an appropriate means of rationing to ensure we get through the dry year, including promoting efficient operation in the event of dry-year scarcity and efficient investment in generation and demand response to manage dry years" closely mirrors MDAG's narrative. This, in turn, naturally leads to the kinds of questions about whether or not price increases are efficiently justified by scarcity, and/or reflect insufficient competition (significant or substantial market power) resulting in inefficient management of dry years and scarcity.

For "efficient management of a medium-term energy scarcity situation" a level playing field is needed where market participants (not just vertically-integrated incumbents) can access appropriate hedge/risk management tools. This is particularly the case where prices not only reflect scarcity, but also the exercise of significant/substantial market power.

These issues have been raised repeatedly in independent retailer submissions on hedge market reform and the risk of price squeezes (particularly, in response to the internal transfer price disclosure consultation).⁴ The issues have manifest in a reduction in the level of retail competition with independent retailers forced to manage dry year risk through curtailment of customer growth⁵ or, in the case of Octopus Energy, indefinite delay in market entry.

Existing control of hydro storage is a bellwether for market power problems under 100% renewables

The following table shows the market share of hydro energy storage where the energy storage of a lake is attributed to the entity that controls releases from the lake. Generation ownership is more concentrated than some headline generation share metrics suggest. The level of control of hydro storage is highly concentrated. The largest 3 hydro generators (CR3) hold 85% of hydro storage, with the 'big 4' (CR4) controlling 97%.

³ Similarly, according to The Brattle Group, acting for Meridian, "The concentrated structure of the New Zealand market" results in prices deviating from cost. Meridian has similarly been clear "there are no requirements to offer based on costs" and it is "economically rational" for generators to seek to generate "at prices the market will support".

⁴ In order to test whether independent or new entrant retailers can compete on a level playing field, or whether there are price squeezes, what matters is comparing the wholesale input price the vertical-suppliers use for retail pricing purposes to what prices third party retailers could reasonably access.

⁵ The independent retailer submissions on the WMR detail how Electric Kiwi ceased marketing, Flick Electric ceased accepting new customers altogether, various independent retailers withdrew from Powerswitch, as well as worrying changes in market concentration statistics during 2021 (particularly in the South Island).



Hydro storage	NZ hydro storage (GWh)	%
Meridian	2,188	49%
Genesis	917	21%
Mercury	671	15%
Contact	535	12%
Other	111	3%
Sum	4,422	100%
CR1		49%
CR3		85%
CR4		97%

Examining hydro energy storage market share understates the dominant position of Meridian. This is because, although Genesis controls discharges from Lake Tekapo, the majority energy stored in the lake enters the electricity market via Meridian's Waitaki hydro assets. Pro rating stored energy in lake Tekapo by power station head reveals that Meridian is the beneficiary from over 60% of the stored hydro energy in New Zealand.

There is no meaningful new entry happening in the types of generation that might increase wholesale competition in medium and long-term energy storage.

Solar or wind projects on their own are an inadequate hedge for most types of consumers, and in particular they are poor hedges for residential consumers where most of the price risk is during winter and evening peaks.

Batteries are only bringing competition to short range storage, and aren't enough even when coupled with wind or solar to adequately hedge most customer types. Significant services still need to be purchased directly or indirectly from NZ's hydro fleet, where Meridian has a dominant position.

The position of hydro storage in the market is particularly important, given MDAG's commentary that, for example:

"The hydro generation base is expected to become much more important as a shock absorber ..."

"... if hydro generators raise their offer prices for generating from stored water, it will not make the wind blow harder or the sun brighter, whereas at present it may incentivise increased thermal operation."

"... the shift to 100%RE may reduce competition in some areas. Our preliminary analysis suggests the areas of greatest concern will be flexibility services for weekly and beyond where batteries are unlikely to be economic, and therefore market concentration is likely to increase. That is because fossil-fuelled thermal plant is currently important in that area, but will cease operation under 100%RE. Furthermore, most of the relevant hydro storage capacity resides in a handful of reservoirs."

Effective risk management products for all major customer types in New Zealand are underpinned by services provided by medium and long term energy storage. The market for these services is already dominated by Meridian and as thermal retires this will become overwhelmingly the case.

Meridian's comments on how it can raise spot prices through its decisions on hydro-storage are prescient

Meridian's WMR submission (including Meridian's consultant reports; particularly that of Axiom)⁶ indicates the extent of control it already has over spot prices, and how its existing approach to storage management –

⁶ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021: <https://www.ea.govt.nz/assets/dms-assets/29/Meridian-submission.pdf>



which it describes as more conservative than its thermal generation competitors such as Genesis – can partly explain why spot prices over the last several years were so high.

The Meridian submission explains that wholesale market pricing outcomes, and how efficiently dry year risk/scarcity is managed, are a function of the commercial decisions and judgements it makes. This is far removed from how a workably competitive market operates. For example:

- Meridian has stated that its “prudent” storage management is “a driver of high offer prices” and “the spot prices observed in the wholesale market over the period ... reflect ... prudent storage management decisions in response to gas market issues”:

“The very close correlation between actual generation and modelled optimal volumes is direct evidence that the supposedly unexplained uplift in prices is (at least for Meridian’s part) not attributable to the exercise of market power but rather the offers that were required to deliver prudent storage management in the face of increased uncertainty about gas generation and limited gas flexibility.”

“... the statistically unexplained uplift in prices is (at least for Meridian’s part) not attributable to the exercise of any market power but rather the offers that were required to deliver prudent storage management in the face of increased uncertainty about gas generation and limited gas flexibility.”

Axiom similarly commented that “managing scarcity” can have a “strong influence ... on ... “expected spot prices”.⁷ Meridian (and Axiom) err in trying to distinguish between exercise/use of market power and the purported purpose that “offers that [Meridian considers] were required to deliver prudent storage management”.

- Meridian says that it adopts a more conservative approach to storage management than other generators; particularly thermal generators.
- Meridian effectively implies it acts as de facto regulator determining the level of dry year risk the market should be exposed to: “Meridian is fortunate to hold around 40 percent of New Zealand’s hydro storage in Lakes Pūkaki and Ōhau (1766GWh). With that storage, comes the responsibility of ensuring that storage is prudently managed ... The assessment made by Meridian is that storage management that applies modest risk aversion is in the best interests of New Zealand and in the best interests of Meridian commercially”.
- How dry year risk is managed is a function of Meridian’s contractual (vertically-integrated) position. This reiterates the position the Brattle Group (on behalf of Meridian) has previously enunciated about how Meridian offers its generation plant to ensure its generation meets its retail customer demand and prices high beyond that:⁸

Meridian has, over the past several years, consistently employed the same bidding strategy. It typically offers its hydro generation into the pool in three main groups of tranches. The first group is offered at or near \$0/MWh to ensure that it is picked up by the market, and is intended to be roughly equal to Meridian’s contracted load requirements. This usually represents the majority of Meridian’s hydro generation capacity. In the second group, Meridian offers a smaller amount of generation based on the availability and opportunity cost of water at various prices (typically less than \$350/MWh).

⁷ Axiom’s submission highlights well that if Meridian has significant or substantial market power and adopts a “conservative” approach to hydro storage it can result in substantially higher prices. A principal proposition of Axiom’s is that the “scarcity management” strategies of “different generators” “have the potential to result in prices that exceed the generators’ operating and maintenance costs”. What Axiom (and Meridian) fail to acknowledge is that this is only possible if a generator has significant or substantial market power, otherwise their individual decisions would not impact spot prices.

For example, Axiom used an example where there is a 98% probability that there will be enough existing generation capacity to meet an additional unit of demand, the short run operating and maintenance cost of the marginal generator in that scenario would be \$10/MWh, and the opportunity cost to customers who consequently miss out (due to scarcity) at time t would be \$10,000/MWh (the assumed VoLL).

Axiom noted: “With these simplifying assumptions, the expected spot price at time t would be: (98% x \$10/MWh) + (2% x \$10,000/MWh) = \$209.50/MWh”. Using this example, if Meridian is gross pivotal and adopted a conservative approach to dry-year management assuming a 4% probability of shortage, the SRMC would nearly double to \$409.60/MWh.

⁸ The Brattle Group, New Zealand Electricity Authority’s Preliminary Decision on UTS, 18 August 2020.



Meridian and Axiom dance on the head of a pin in their attempt to distinguish between exercise of market power and the purported purpose that “offers that were required to deliver prudent stoorage management in the face of increased uncertainty about gas generation and limited gas flexibility”.⁹

A correct interpretation of Meridian’s (and Axiom) submission is that Meridian exercises significant or substantial market power in applying judgement about how hydro storage should be managed on the market, rather than “that those offers could have been an exercise of market power to increase revenue” [emphasis added] per se. The Meridian (and Axiom) story is essentially that higher spot prices are an outcome (or byproduct) of the (purportedly benevolent) exercise of market power to manage dry year risk on behalf of the market.

Electric Kiwi and Haast strongly advocate for a workably competitive market where the management of dry year risk/scarcity is managed by the interplay of many market participants on the supply and demand side, none of whom can materially influence price and market outcomes. This is contrary to the current systems when the market is beholden to the commercial decisions and judgements of Meridian as the largest and most dominant generator.

The comments Meridian has made reflect a distinction between high prices that reflect genuine scarcity and high prices that reflect Meridian’s view on how its hydro storage is managed. The latter is not conducive to building confidence that high prices reflect supply and demand conditions and the outcomes of a workably competitive market. It is not surprising questions are being raised now by the Government, the Electricity Authority and various other stakeholders and market participants about whether prices are too high. The Authority’s WMR work is at the early stages but it indicates there is \$38/MWh of price uplift that cannot be explained by legitimate cost and market conditions.

Electric Kiwi and Haast largely support the direction MDAG is heading

MDAG has articulated well the requirements for an energy-only market. Mirroring the comments we made in our dry year submission, we agree the pre-conditions for an energy-only market to work properly include:

- (a) Prices that reflect real supply and demand conditions, including very high prices in times of scarcity;
- (b) Confidence among wholesale buyers and sellers that the high prices make sense, (which means confidence in the structure and rules of the market, including the sufficiency of competition);
- (c) Availability of ‘tools’ for wholesale buyers and sellers to manage their exposure to those spot price risks;
- (d) General public and political acceptance that volatility and high prices (in times of scarcity) in the wholesale market are, in fact, in the best long-term interest of consumers ...; and
- (e) Confidence among consumers/politicians that investment will be timely and competitive.

We also agree that “Fulfilling (d) and (e) above is highly influenced by whether (a) to (c) are satisfied”.

We also strongly support the positions posited by MDAG that:

- **A 100% renewables scenario would not cause spot prices to collapse:** “In some jurisdictions, concerns have been raised that spot prices might exhibit ‘bang-bang’ or bi-modal outcomes, where they oscillate between zero and the Value of Lost Load (VoLL). This raises the question of whether such outcomes might arise in New Zealand. For that to be likely, it would be necessary to believe that the system under 100%RE will cycle between surplus (spill) and shortage (demand curtailment) with very little time in between these states. Furthermore, for that cycling to persist, it would be necessary to believe that there are no self-correcting forces that reduce the likelihood of such cycles in future.

“These pre-conditions appear unlikely to hold in New Zealand ...”

⁹ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.



- **There is a high risk that market concentration could get worse/Meridian's (in particular) market power could increase in the transition to 100% renewables:** "... in directional terms, it does seem that market concentration could materially increase for provision of seasonal flexibility services. That is because fossil-fuelled thermal plant is currently important in that area, but will cease operation under 100%RE. Furthermore, most of the seasonal hydro storage capacity is held in a handful of reservoirs. That would affect competition in the spot market and in the contract market for relevant products."
- "the shift to 100%RE may reduce competition in some areas. Our preliminary analysis suggests the areas of greatest concern will be flexibility services for weekly and beyond where batteries are unlikely to be economic, and therefore market concentration is likely to increase. That is because fossil-fuelled thermal plant is currently important in that area, but will cease operation under 100%RE. Furthermore, most of the relevant hydro storage capacity resides in a handful of reservoirs."
- "Another key change resulting from fossil-fuelled station retirements is that storage trajectories in major reservoirs will largely trace out the effect of weather and be less subject to short-term management. Put simply, if hydro generators raise their offer prices for generating from stored water, it will not make the wind blow harder or the sun brighter, whereas at present it may incentivise increased thermal operation."
- "Another important issue to bear in mind is that competition is often reduced when the system is under stress, and yet those are the times when it can be most important to have confidence in prices and the market rules that govern their formation."
- From Grant Read: "Removing thermal capacity is likely to strengthen the incentives for the remaining flexible capacity providers to make steeper offer curves, and that may become an issue, given the increasing need to provide flexible support to intermittent generator entrants."
- **"This increased concentration may hinder competition in both the spot and contracts markets, especially for products to firm intermittent supply and provide seasonal flexibility."**
- **"Competition will be [and is] vital".**
- **"Without effective competition consumers and policy makers will not have confidence in electricity spot or contract prices.** And without that confidence, investors are unlikely to commit the sums needed to underpin the shift to 100%RE. Competition also has a critical role to play in spurring innovation and finding the best solutions to drive down costs over time. This will be particularly important in an environment where technology and business models are evolving rapidly."
- "Competition also has a critical role to play in spurring innovation and finding the best solutions to drive down costs over time."
- **"Contracts market will have to do more 'heavy lifting'".**
- "Questions arise as to whether the required range of products, information and liquidity will emerge in a timely manner."
- "... increased volatility per se should not pose unmanageable risks for investors or purchasers *provided they can enter into suitable forward contracts*. This involves both access to the products themselves and having confidence in the pricing of those contracts."
- "Given the importance of the contract market to providing incentives for generation, and allowing retailers to efficiently manage risk, ... it will be [and is] critical to ensure the availability of risk management products that participants require, as the transition to a higher volatility market takes place."
- "... it is important that the types of products needed to manage risk in a 100%RE will be available to market participants."



- **Structural measures are in the mix of options that could be considered:** "... if competition were ... inadequate in some key segments of the wholesale market, remedial options would need to be considered. A spectrum of options could be considered, ranging from strengthened market conduct provisions through to contract offer obligations, virtual disaggregation or structural measures."

Where we principally depart from MDAG (and/or its advisors) is that:

- **MDAG should not make assumptions that the current level of competition is adequate:** It might be that the language isn't as precise as it could be, but the statement "Looking further ahead, if competition were to become inadequate" assumes competition is presently adequate, and is conflict with the statement that "At this stage there is insufficient information to form any definitive views about competition".¹⁰

It may be useful to refer to the WMR and the UMR surveys etc to help inform the project assumptions about the starting point level of competition in the electricity market.

- **Problems in the hedge market are vertical-integration problems and not demand-side problems:** Care is needed with the statement "It would be a problem if parties' economic incentives to contract were to weaken". As noted in the independent retailer joint submission, statements like this risk incorrectly depicting a supply-side problem (the incentives of vertically-integrated incumbents to provide access to adequate hedging arrangements needed for independent retailers to compete) as a demand-side problem (access seekers deciding not to take up adequate hedging cover).

The misdiagnosis of the problem as a demand-side problem is highlighted by the statement that "... the rise in the proportion of time when very low spot prices will occur ... may prompt a behavioural change by purchasers, and encourage them to take on more spot exposure". This mirrors previous Sapere claims about the "Temptation for purchasers to take risk if prices low for extended periods" and the unsound assertion that it is "Difficult for small retailers ... to understand price formation, which reduces trust in market".¹¹ We also note there are policy mechanisms already in place, such as stress-testing, which would address these types of issues if they were valid.

- **MDAG should explicitly distinguish between prices that are high due to genuine scarcity (not a problem) and prices that reflect monopoly pricing (a problem).** It should be apparent from our submissions on WMR and 2021 dry year, for example, that we clearly distinguish between the two. MDAG needs to as well. This will help avoid policy prescriptions, such as the suggested UTS changes, which would protect monopoly pricing and not just scarcity pricing.
- **"Price suppression" risk doesn't warrant the level of focus it is given in the consultation material.** This point is discussed in more detail in the joint independent submission. Consideration of price suppression should be symmetric and include factors that might prevent low prices, or prices dropping as low as they should and for as long as they should.
- **Incumbent generators may be balancing the extent to which they monopoly price against regulatory risk:** We suspect incumbent generators have "self-imposed suppression of generation offers" which curb the extent to which they abuse market power/monopoly price, and to manage the associated political risk, rather than to price "below efficient levels". Based on the Authority's WMR observation that there has been a step change (or more likely step changes) in offer behaviour it may well be the case that what the market is currently experiencing is a breakdown of this "self-imposed suppression" with a gradual move to "anything goes" offer strategies. The incumbent generators, particularly Meridian, are essentially testing what they can get away with and for how long.

¹⁰ Our edit of the statement above fixes the statement.

¹¹ <https://www.ea.govt.nz/assets/dms-assets/28/Sapere-Research-Group-presentation.pdf>



- **MDAG's suggestion for amending the UTS provisions is unsound:** We do not agree with MDAG that including "an explicit requirement to consider effects of any [UTS] decisions on future investment incentives" would "Strengthen the process for determining UTS". Activity that is undesirable and undermines confidence in the market should not be given a 'safe-harbour' just because it artificially raises prices and improves investment returns. If consideration of extraneous matters were to be included in the UTS provisions then there would be merit in including a list of matters such as the Government's climate change ambitions and the need for efficiently low prices to encourage electrification, battery storage etc.
- **The value of water is zero when reservoirs are full and hydro plants are spilling:** Grant Read establishes a strawman proposition with the statement that "From that deterministic perspective, we see that the common assertion that the marginal value of water must be zero when the reservoir is full, does not hold". This requires a limited scenario where the reservoir is full but won't spill. We agree with the statement Grant Read made elsewhere that "The Marginal Cost of Release (MCR) will obviously be zero, when spill becomes inevitable, and that may happen even before the reservoir is full".

Concluding remarks

We welcome the opportunity to engage with MDAG on this topic, and look-forward to assisting the advisory group as it works its way through issues discovery to option identification, options analysis and developing recommendations and a proposal for the Authority Board.

Electricification of the New Zealand economy and the Government's decarbonisation goals hinge on electricity being affordable.

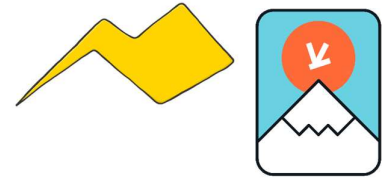
Yours sincerely,

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21 January 2022

Submissions
Electricity Authority

By e-mail: consult-2021dryyearreview@ea.govt.nz; reviewconsultation2021@ea.govt.nz

Electric Kiwi welcomes the 2021 dry year review

Electric Kiwi and Haast Energy Trading (Haast) welcome and support the Electricity Authority undertaking reviews of how well the market has operated during times of stress, such as the 2021 dry year.

We welcome that the Authority has also signalled it is looking into the circumstances behind the high prices in January 2022.¹ We consider that hydro conditions exacerbated the core underlying problems of market concentration and exercise of market power in 2021;² while in January 2022 lake levels are more than adequate but we are still seeing the underlying market concentration problems manifest.

Scope of the review

We recognise the Authority's intent is that the dry year review does not include "market structure" or "trends within wholesale prices, except in the context of the acute impact of wholesale pricing on securing the outcomes sought by the security of supply regime", which are covered by the wholesale market review (WMR).

The issues the Authority has identified as part of the WMR, however, directly impact of how well dry years are managed and vice versa. The overlap in issues between the dry year review and the WMR are such that our submission is relevant to both reviews.

The tight link is highlighted by Meridian's attempt to somehow use the Authority's 2021 dry year review as evidence there is no market power problem in relation to the WMR e.g.:

The Authority commissioned an independent review of 2021 by Martin Jenkins (overlapping with the last six months of the Authority's own wholesale market review). The independent review of 2021 found: ...

"The system worked as intended. ..."

We encourage the Authority to consider the independent review findings alongside its own analysis.

The dry year review should not be considered in a policy silo

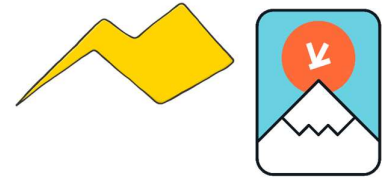
The dry year review, WMR and hedge market development are all highly inter-related projects.

The Authority's comment that "the role of higher prices is recognised as an appropriate means of rationing to ensure we get through the dry year, including promoting efficient operation in the event of dry-year scarcity and efficient investment in generation and demand response to manage dry years" naturally leads to the question about whether or not price increases are efficiently justified by scarcity, and/or reflect significant/substantial market power resulting in inefficient management of dry years.³

¹ <https://www.ea.govt.nz/about-us/media-and-publications/market-commentary/market-insights/high-wholesale-electricity-prices-in-jan-2022/>

² Axiom (on behalf of Meridian) has noted that "the demand and supply conditions that can lead to high spot prices in a well-functioning competitive spot market ... are also the most likely to encourage the exercise of market power" and "Specifically, it is in that same environment in which market participants can have the strongest incentives to engineer price spikes through creating – or signalling – contrived scarcity" i.e. market power problems can exacerbate the impact of dry-year situations on spot prices etc. Axiom (on behalf of Meridian), Economic Review of the Electricity Authority's Analysis of Spot Prices, December 2021.

³ See Axiom's observations at footnote 2.



The interlinkages are made very clear by Meridian's WMR submission (including its consultant reports; particularly Axiom). The Meridian submission explains that wholesale market pricing outcomes, and how efficiently dry year risk is managed, are a function of the commercial decisions and judgements it makes. For example:

- Meridian has stated that its “prudent” storage management is “a driver of high offer prices” and “the spot prices observed in the wholesale market over the period ... reflect ... prudent storage management decisions in response to gas market issues”:⁴

“The very close correlation between actual generation and modelled optimal volumes is direct evidence that the supposedly unexplained uplift in prices is (at least for Meridian's part) not attributable to the exercise of market power but rather the offers that were required to deliver prudent storage management in the face of increased uncertainty about gas generation and limited gas flexibility.”

“... the statistically unexplained uplift in prices is (at least for Meridian's part) not attributable to the exercise of any market power but rather the offers that were required to deliver prudent storage management in the face of increased uncertainty about gas generation and limited gas flexibility.”

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- Meridian says that it adopts a more conservative approach to storage management than other generators; particularly thermal generators.
- Meridian effectively implies it acts as de facto regulator determining the level of dry year risk the market should be exposed to: “Meridian is fortunate to hold around 40 percent of New Zealand's hydro storage in Lakes Pūkaki and Ōhau (1766GWh). With that storage, comes the responsibility of ensuring that storage is prudently managed ... The assessment made by Meridian is that storage management that applies modest risk aversion is in the best interests of New Zealand and in the best interests of Meridian commercially”.
- How dry year risk is managed is a function of Meridian's contractual (vertically-integrated) position. This reiterates the position the Brattle Group (on behalf of Meridian) has previously enunciated about how Meridian offers its generation plant to ensure its generation meets its retail customer demand and prices high beyond that:⁶

Meridian has, over the past several years, consistently employed the same bidding strategy. It typically offers its hydro generation into the pool in three main groups of tranches. The first group is offered at or near \$0/MWh to ensure that it is picked up by the market, and is intended to be roughly equal to Meridian's contracted load requirements. This usually represents the majority of Meridian's hydro generation capacity. In the second group, Meridian offers a smaller amount of generation based on the availability and opportunity cost of water at various prices (typically less than \$350/MWh).

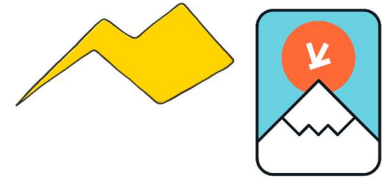
⁴ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.

⁵ Axiom's submission highlights well that if Meridian has significant or substantial market power and adopts a “conservative” approach to hydro storage it can result in substantially higher prices. A principal proposition of Axiom's is that the “scarcity management” strategies” of “different generators” “have the potential to result in prices that exceed the generators' operating and maintenance costs”. What Axiom (and Meridian) fail to acknowledge is that this is only possible if a generator has significant or substantial market power, otherwise their individual decisions would not impact spot prices.⁵

For example, Axiom used an example where there is a 98% probability that there will be enough existing generation capacity to meet an additional unit of demand, the short run operating and maintenance cost of the marginal generator in that scenario would be \$10/MWh, and the opportunity cost to customers who consequently miss out (due to scarcity) at time t would be \$10,000/MWh (the assumed VoLL).

Axiom noted: “With these simplifying assumptions, the expected spot price at time t would be: $(98\% \times \$10/\text{MWh}) + (2\% \times \$10,000/\text{MWh}) = \$209.50/\text{MWh}$ ”. Using this example, if Meridian is gross pivotal and adopted a conservative approach to dry-year management assuming a 4% probability of shortage, the SRMC would nearly double to \$409.60/MWh.

⁶ The Brattle Group, New Zealand Electricity Authority's Preliminary Decision on UTS, 18 August 2020.



Electric Kiwi and Haast prefer a workably competitive market where the management of dry year risk is managed by the interplay of many market participants on the supply and demand side, none of whom can materially influence price and market outcomes, rather than being beholden to the commercial decisions and judgements of Meridian as the largest and most dominant generator.

A representative selection of market participants should have been interviewed, and not just large market participants

We consider that it would have been preferable for Martin Jenkins to have interviewed a broader cross-section of market participants – including independent retailers and large users – rather than limiting the interviews to large generators (plus Pioneer and Nova), Transpower, the Authority and MBIE.

The limitations of the narrow interview group are reflected in Martin Jenkins “[o]verall” conclusion “larger market participants were prepped for a dry year and had plans to manage the risk”. What about smaller market participants and everyone else?

Summary of Electric Kiwi and Haast’s views

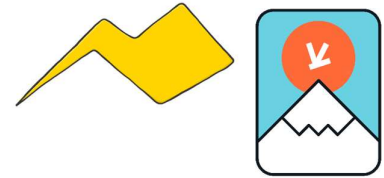
- **Efficient management of dry years requires: (i) prices which reflect genuine scarcity only; and (ii) market participants have tools available to efficiently manage dry year risk.** Problems with significant or substantial market power in the wholesale market resulting in artificially high spot prices are well telegraphed in the Authority’s wholesale market review, while problems with hedging arrangements have been extensively detailed by independent retailers, including in the Electricity Price Review.
- Market arrangements that rely on high prices to (efficiently) signal scarcity can be put at risk if prices also reflect significant/substantial market power, and if prices rise to levels well above that justified by market conditions/scarcity of supply.
- **Market power problems harm the wholesale electricity market’s ability to efficiently manage dry year risk:** The dry year and wholesale market reviews should not be conducted in isolation of each other.
- **Meridian’s size and market power means how well dry year risk is managed depends on its commercial decisions and judgement:** Meridian’s WMR submission (including Meridian’s consultant reports), if taken at face value, indicates Meridian adopts a “conservative” approach to storage management – which is more conservative than its competitors such as Genesis – and this can explain why spot prices were so high in 2021 (and adjoining years).

What can be taken from the Meridian submission is that the market outcomes in 2021 were not simply a function of price discovery or the multiple competing suppliers making individual judgements about the dry year situation in a workably competitive market. Rather Meridian’s significant or substantial market power meant it was able to raise prices in 2021, and the efficiency of dry year management was a function of Meridian’s judgements. If Meridian gets it wrong, New Zealand gets it wrong.

- **Implications of the structure of the market and, specifically, Meridian should be considered:** The Authority should specifically consider the impact of Meridian’s size, and control over the majority of water storage in New Zealand. Meridian has been left with 55-to-60% of New Zealand’s hydro generation capacity and 35% of New Zealand’s generation supply.⁷

As part of next steps, the Authority should consider the implications of Meridian’s statements that how the dry year is managed is a function of the mix of generation plant it owns and operates, and its contract position/level of vertical-integration:

⁷ The Authority’s WMR noted “Meridian has 30 percent of the market-generating capacity (from its South Island hydro generation) but is needed to meet demand over 90 percent of the time”



“In respect of all these statements, the distinction is obviously that Meridian and Mercury do not have thermal plant to turn on, so manage storage lakes to reduce shortage risks using higher offers. The commercial implications of shortage are significant for hydro generators who would be short and purchasing from spot to cover contracts at very high prices.”⁸

“... when Manapōuri experiences low lake levels, additional storage from lake Pukaki can be used to cover Meridian’s contract position.”⁹

“Different generators may also have contrasting expectations about future supply risks and varying approaches to managing them. ... For example:

- hydro generators with discretionary thermal generation (e.g., Genesis and Contact) may have a greater appetite for risk, safe in the knowledge they can rely on those assets as ‘back-up’ if water levels run low; whereas
- Meridian does not own any thermal ‘firming’ plants that it can fall back on if its southern storage lakes start to run dry, which may diminish considerably its willingness to needlessly elevate longer-term supply risks.”¹⁰

- **Market participant conduct and market participant statements about their conduct are relevant:**

Meridian has been very clear “Spilling ... is consistent with the normal operation of the wholesale market”¹¹ and the Authority’s December 2019 UTS determination concluded that Contact/Meridian hydro spill resulted in greater operation of Mercury’s hydro resulting in reduction in North Island hydro storage¹² e.g. “excess spill in the South Island ... increased security of supply risks in the North Island”. It could be useful to test whether, or the extent to which, this impacted the extent of the 2021 dry year situation.

- **The Authority should review the Consumer Compensation Scheme:** Electric Kiwi and Haast consider that, as part of consideration of how well the market manages dry year risk, the Authority should review the role and function of the Consumer Compensation Scheme (CCS). The Authority last undertook what it labelled a “limited” review of the scheme in 2016.

The scheme is biased against independent retailers who are required to compensate consumers in a dry year situation even though independent retailers have no control over the situation. The vertically-integrated retailers are insulated from the cost of the scheme as they can fund CCS payments through higher wholesale electricity prices.

- Mercury Energy’s terms and conditions should specifically be looked at as part of the review of the CCS. The Mercury terms and conditions mean that if a dry year situation arises, including a requirement to make CCS payments, Mercury can simply raise their retail prices with only 48 hours notice.

Efficient management of dry years requires: (i) prices which reflect genuine scarcity only; and (ii) market participants have tools available to efficiently manage dry year risk

It is appropriate (high) prices signal scarcity, but this is undermined where market participants and consumers don’t have confidence that heightened prices reflect genuine scarcity rather than (or as well) significant or substantial market power.

These issues are well telegraphed in the Authority’s wholesale market review.

For example, we agree with the Authority WMR finding that “There is some evidence of an increased incentive and ability for electricity generators to structure their offers into the market in a way that keeps prices high

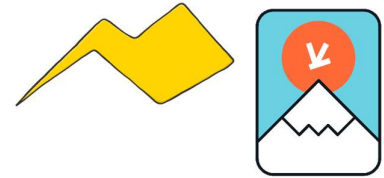
⁸ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.

⁹ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.

¹⁰ Axiom (on behalf of Meridian), Economic Review of the Electricity Authority’s Analysis of Spot Prices, December 2021.

¹¹ Meridian Submission, Preliminary decision on claim of an undesirable trading situation, 18 August 2020.

¹² The Authority noted: “Water was spilled that could have been used to generate electricity. Had this generation been dispatched, the Authority’s analysis indicates that there would have been a significant impact on electricity spot prices and North Island fuel (water) would have been conserved to deal with impending outages. As well as adversely impacting the spot market, excess spill in the South Island thus increased security of supply risks in the North Island”. Electricity Authority, Proposed Actions to Correct Undesirable Trading Situation 2019, Consultation paper, 11 March 2021.



(economic withholding)” and there is “evidence to suggest that prices may not have been determined in a competitive environment”.¹³

The 2021 dry year review is out of step with the WMR e.g. the WMR consultation paper uses UTS language and talks about a “confluence of factors that lead to prices that were higher than average in the first half of 2021” but Martin Jenkins not consider the WMR findings that high prices cannot be fully explained by legitimate supply and demand conditions, and evidence prices were substantially higher than they needed to be reflecting the use of significant/substantial market power.

The interlinkage between the Authority’s WMR, and consideration of how well the market managed the 2021 dry year, is also reflected in the Authority’s observation of growing market power problems leading up to the dry year e.g. “Meridian ... was gross pivotal in the South Island around 77 percent of the time in each year from 2016 to 2018. This increased to around 90 percent to 95 percent in 2019 to 2021 (to 30 June)”. This means that 90 to 95% of the time Meridian has market power enabling it to set the spot price by withholding electricity capacity or raising offer prices (which the Authority describes as “economic withholding”).

We saw this vividly in December 2019 when the Authority found Meridian (and Contact) unnecessarily spilt water resulting in higher spots and an Undesirable Trading Situation.¹⁴

Meridian’s WMR submission (including Meridian’s consultant reports; particularly that of Axiom) indicates Meridian adopts a conservative approach to storage management – which is more conservative than its thermal generation competitors such as Genesis – and this can explain why spot prices were so high.

Meridian (and Axiom) is dancing on the head of a pin in its attempt to distinguish between exercise of market power and the purported purpose that “offers that were required to deliver prudent storage management in the face of increased uncertainty about gas generation and limited gas flexibility”.¹⁵

A correct interpretation of Meridian’s (and Axiom) submission is that Meridian is exercising significant or substantial market power in applying judgement about how hydro storage should be managed on the market, rather than “that those offers could have been an exercise of market power to increase revenue” [emphasis added] per se. The Meridian (and Axiom) story is essentially that higher spot prices are an outcome (or byproduct) of the (benevolent) exercise of market power to manage dry year risk on behalf of the market, but not the “purpose” of the exercise of market power.

Whether or not market power is exercised to reflect judgements about prudent storage management or to extract higher prices doesn’t change that Meridian exercised significant or substantial market power during the 2021 dry year and beyond.

Axiom (for Meridian) articulate well that “... different generators may have contrasting expectations about future supply risks, (i.e., these are not ‘facts’ – there is an unavoidable element of subjectivity). Hydrological conditions, the nature of drought and the intensity of spill all vary across the different catchment systems. Generators’ approaches to managing those perceived risks may also be coloured by a plethora of other factors, including the combination of generation technologies comprising their respective profiles”.¹⁶ This is what you want and should expect in a workably competitive market. What you don’t want, and what would be inconsistent with workably competitive market outcomes, is if any individual generator has significant or substantial market power which means its expectation about future supply risks, and how they should be managed, etc materially impacts prices or how well the dry year risk is managed.

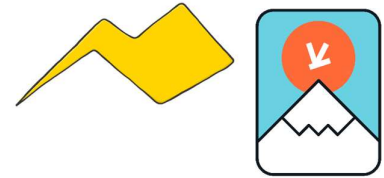
¹³ Similarly, according to The Brattle Group, acting for Meridian, “The concentrated structure of the New Zealand market” results in prices deviating from cost. Meridian has similarly been clear “there are no requirements to offer based on costs” and it is “economically rational” for generators to seek to generate “at prices the market will support”.

¹⁴ The Authority found that Meridian (and Contact) didn’t breach the high standard of trading conduct rules that existed at the time because it was “shielded” by the safe-harbour provisions which existed at the time. Meridian unsuccessfully complained to the Broadcasting Standards Authority when Radio NZ correctly made the point that Meridian got off on a “technicality”.

The Trading Conduct rules have been amended to remove the safe-harbour provisions and this loophole.

¹⁵ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.

¹⁶ Axiom (on behalf of Meridian), Economic Review of the Electricity Authority’s Analysis of Spot Prices, December 2021.



What can be taken from the Meridian submission is that market outcomes in 2021 were not simply a function of price discovery or multiple competing suppliers making individual judgements about the dry year situation in a workably competitive market. Rather Meridian's significant or substantial market power meant it was able to raise prices in 2021, and the efficiency of dry year management was a function of Meridian's judgements. If Meridian gets it wrong, New Zealand gets it wrong.

Further, for "efficient management of a medium-term energy scarcity situation" a level playing field is needed where market participants (not just vertically-integrated incumbents) can access appropriate hedge/risk management tools. This is particularly the case where prices not only reflect scarcity, but also the exercise of significant/substantial market power.

These issues have been well telegraphed in independent retailer submissions on hedge market reform, and the risk of price squeezes (particularly, in response to the internal transfer price disclosure consultation).¹⁷ The issues have manifest in a reduction in the level of retail competition with independent retailers forced to manage dry year risk through curtail of customer growth.¹⁸

Strawman arguments and claims

The Martin Jenkins report makes a number of strawman arguments which aren't substantiated and detract from the report e.g. claims that "confidence was threatened in the later stages of the dry year event by building media and political pressure", and "If the rules were to be rewritten on the fly, market certainty would have been shattered".

The Authority similarly talked axiomatically about "the gap between actual risk and perceived risk" without providing evidence of this gap, or detailing what the gap actually is. It appears to be implicit that the Authority considers 'perceived' risk is higher than actual risk.

The Authority also raised concerns about the regime being "undermined by interest groups" and that this could "compromise the efficiency and effectiveness of the system, ensuring the regulatory and market arrangements are durable". Electric Kiwi and Haast consider that if the "system" is efficient and effective then regulatory and market arrangements should be durable. Durability is undermined where substantial market or regulatory failures exist and these are not addressed. Our views on durability issues are detailed in our submission, and the joint independent retailer submission, on the WMR e.g. the independent retailer submission noted "It is the continued (and/or increasing) exercise of market power that undermines confidence in the market".

The Authority should review the Consumer Compensation Scheme

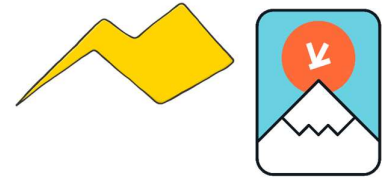
Electric Kiwi and Haast consider that, as part of consideration of how well the market manages dry-year risk, the Authority should review the role and function of the Consumer Compensation Scheme (CCS). The Authority last undertook what it labelled a "limited" review of the scheme in 2016.

Electric Kiwi and Haast consider the scheme to be anachronistic, and unsuitable for a market where there is a mix of vertically-integrated and independent retailers.

The scheme is based on the flawed premise that it is needed "to strengthen a retailer's incentives to hedge". This turns the problems in the electricity market on their head. The problem isn't that retailers do not have sufficient incentives to hedge. The problem is lack of availability of adequate hedging arrangements for

¹⁷ In order to test whether independent or new entrant retailers can compete on a level playing field, or whether there are price squeezes, what matters is comparing the wholesale input price the vertical-suppliers use for retail pricing purposes to what prices third party retailers could reasonably access.

¹⁸ The independent retailer submissions on the WMR detail how Electric Kiwi ceased marketing, Flick Electric ceased accepting new customers altogether, various independent retailers withdrew from Powerswitch, as well as worrying changes in market concentration statistics during 2021 (particularly in the South Island).



independent retailers. This has been well documented in independent retailer submissions and the recent Electricity Price Review.

The management of dry year risk is a function of incumbent generator/vertically-integrated retailer decisions as made clear by the Meridian WMR submission cited above.

The scheme is biased against independent retailers who are required to compensate consumers in a dry year situation even though independent retailers have no control over the situation. The vertically-integrated retailers are insulated from the cost of the scheme as they can fund CCS payments through higher wholesale electricity prices.

Mercury Energy's terms and conditions should specifically be looked at as part of the review of the CCS. The Mercury terms and conditions mean that if a dry year situation arises, including a requirement to make CCS payments, Mercury can simply raise their retail prices with only 48 hours notice:¹⁹

21. Temporary Supply Emergency

21.1 If at any time we reasonably consider that a serious Energy supply shortage or other threat to our ability to supply Energy exists or is imminent we may declare a "Temporary Supply Emergency", either by written notice or in a public notice in a local newspaper or on our website (www.mercury.co.nz). Any declared Temporary Supply Emergency shall continue in force until either the date (if any) stated in the notice declaring the Temporary Supply Emergency or the date upon which the Temporary Supply Emergency is subsequently declared to be ended as advised by us in a written notice or Public Notice or on our website, as contemplated by clause 11.

21.2 Notwithstanding any other provision in these standard terms and conditions, during any Temporary Supply Emergency we may make temporary changes to the standard terms and conditions and/or our prices by giving you at least 48 hours' notice ('Shortened Notice of Change'), either by written notice or in a public notice in a local newspaper or on our website (www.mercury.co.nz). Any changes made using a Shortened Notice of Change will automatically expire at the end of the Temporary Supply Emergency, at which time the standard terms and conditions and our prices shall revert to those in force immediately prior to the giving of the Shortened Notice of Change. For the avoidance of doubt, any change made by giving you at least 30 days' notice will not constitute a Shortened Notice of Change.

Concluding remarks and next steps

Electric Kiwi and Haast do not consider Meridian acting as de facto regulator determining the level of dry year risk the market should be exposed to is an efficient way to manage dry year risk. Rather, efficient management of dry year risk requires a workably competitive market – with prices which reflect genuine scarcity only – and the ability of all market participants to efficiently manage dry year risk e.g. through hedging arrangements. These are two gaps in the current market which need to be addressed. Electric Kiwi and Haast consider that the WMR is likely to be a good vehicle for doing so. We note independent retailer submissions have highlighted that the Authority should consider how market concentration problems in the wholesale market manifest in closely related (hedging) and downstream (retail markets).²⁰

The dry year review and the wholesale market review should not be conducted in isolation of each other, and the wholesale market review should feed into the dry year review.

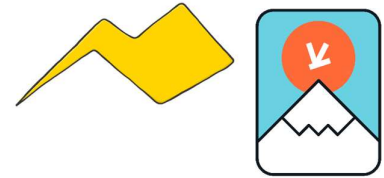
As part of next steps, the dry year review should specifically consider:

- The impact of significant or substantial market power on the efficient management of dry year risk; including:
 - The extent to which dry year management deviates from workably competitive market outcomes;
 - The extent to which dry year management depends on the commercial decisions and judgements of Meridian;

¹⁹ <https://www.mercury.co.nz/terms-conditions/residential/standard-terms-and-conditions-for-residential-cust.aspx>

²⁰ The European Union has observed "Where [a supplier] has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the [supplier]".

Article 14(3) of Directive 2002/21/EC: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32002L0021>.



- The implications of Meridian's statements that how the dry year is managed is a function of the mix of generation plant it owns and operates, and its contract position/level of vertical-integration:

"In respect of all these statements, the distinction is obviously that Meridian and Mercury do not have thermal plant to turn on, so manage storage lakes to reduce shortage risks using higher offers. The commercial implications of shortage are significant for hydro generators who would be short and purchasing from spot to cover contracts at very high prices."²¹

"... when Manapōuri experiences low lake levels, additional storage from lake Pukaki can be used to cover Meridian's contract position."²²

"Different generators may also have contrasting expectations about future supply risks and varying approaches to managing them. ... For example:

- hydro generators with discretionary thermal generation (e.g., Genesis and Contact) may have a greater appetite for risk, safe in the knowledge they can rely on those assets as 'back-up' if water levels run low; whereas
- Meridian does not own any thermal 'firming' plants that it can fall back on if its southern storage lakes start to run dry, which may diminish considerably its willingness to needlessly elevate longer-term supply risks."²³

- The implications of Meridian's allegations about "the possibility of economic withholding by thermal generators";
- The impact of the 'Tiwai contract' on the 2021 dry year;
- How the extended dry year situation impacted retail competition, including the extent to which market participants (particularly independent retailers) have tools available to efficiently manage dry year risk;
- The role and function of the Consumer Compensation Scheme; and
- Mercury Energy's terms and conditions should specifically be looked as part of the review of the CCS. The Mercury terms and conditions mean that if a dry year situation arises, included a requirement to make CCS payments, Mercury can simply raise their retail prices with only 48 hours notice.

Yours sincerely,

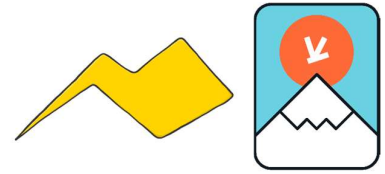
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²¹ Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.

²² Meridian, Meridian submission: Review of competition in the wholesale market, 22 December 2021.

²³ Axiom (on behalf of Meridian), Economic Review of the Electricity Authority's Analysis of Spot Prices, December 2021.



17 December 2021

James Stevenson-Wallace
Chief Executive Officer
Electricity Authority

By e-mail: reviewconsultation2021@ea.govt.nz

Dear James,

The wholesale market has a \$2.4 billion p.a. over-pricing problem

Electric Kiwi and Haast Energy Trading (Haast) agree with MBIE that “The New Zealand Electricity Market ... remains the best model for delivering the outcomes expected from the sector”. We want the wholesale electricity market to fully deliver the competitive outcomes it was set up and designed to enable.

We also agree with MBIE’s warning that the electricity sector needs to “maintain its social license to operate” and “If people lose trust in the market and market participants, perhaps because of pricing or reliability, then the political process may explore alternatives to the current market. Such alternatives exist and are being used in other jurisdictions”.¹

The Authority’s findings include \$2.4 billion of potential wholesale market over-pricing per annum.² The actual extent of the over-pricing is potentially larger as this estimate uses pre-Pohokura outage pricing as a base-line. Market failures of this scale and nature need to be addressed to protect the electricity market, and ensure the market operates properly and efficiently.

Structural reform and break-up of Meridian is needed for a thriving, competitive electricity industry.

Meridian’s warnings 10-years ago are mirrored in the Authority’s wholesale market review findings

Meridian’s 100%-owned subsidiary warned in 2011: “... we remain fearful that ... manipulations ... may become more prevalent in the market, leading to higher and more volatile wholesale energy prices, and in turn prices faced by consumers”.³ Meridian also warned of the risk “anything goes”⁴ and high prices could be the “new normal”.⁵

We are not sure whether Meridian’s warnings were prescient or simply a self-fulfilling prophecy.

We agree with Meridian “Participants will lose confidence in the integrity of the market if prices are divorced from efficient supply-demand conditions and excessively higher than underlying costs. This could result in both inefficient investment signals and inefficient consumption by individual consumers, as well as reducing the potential level of demand-side management through deterring demand-side participation in the wholesale market”.⁶

¹ MBIE, Investigation into electricity supply interruptions of 9 August 2021, 2021:

<https://www.mbie.govt.nz/dmsdocument/17988-investigation-into-electricity-supply-interruptions-of-9-august-2021>

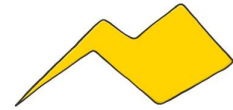
² This includes \$863m of over-pricing due to the Tiwai contract arrangements and \$38/MWh which the Authority has not been able to explained based on supply and demand conditions and may be a result of “lack of competitive offer behaviour by generators”: https://www.linkedin.com/posts/electricity-authority-of-new-zealand_the-authority-is-currently-consulting-on-activity-6874514213331718144-qcCl

³ Meridian (Powershop), Draft decision of the Electricity Authority under Part 5 of the Electricity Industry Participation Code regarding an alleged Undesirable Trading Situation on 26 March 2011, 13 May 2011.

⁴ Meridian, Draft Decision regarding alleged UTS on 26 March 2011 – Cross Submission, 19 May 2011.

⁵ Meridian, Proposed Actions regarding 26 March 2011 UTS, 21 June 2011.

⁶ Meridian, Draft Decision regarding alleged UTS on 26 March 2011, 13 May 2011.



Where we depart from Meridian is that we believe bad corporate behaviour and the abuse of market power is undermining confidence in the market, as opposed to their view it is other market participants or the Authority reporting on, or calling out, such behaviour that is undermining confidence.⁷

The Authority's wholesale market review bears out Meridian's warnings, as well as the views of Matt Rowe that there has been a step change in spot prices and offer behaviour;⁸ and the views of Entrust that the Tiwai contracts are "being used to artificially prop up wholesale prices":⁹

- The Authority investigation highlights that the Authority letter to Meridian is likely to be one of various factors that contributed to the structural shift in pricing the Authority has identified.¹⁰
- Since Entrust raised its concerns about the Tiwai arrangements in 2018 the Tiwai contract price has reduced substantially, and the problem has gotten worse. The Authority can draw on the evidence provided by Entrust, as well as previous MBIE-Treasury modelling of the impact of Tiwai to support its investigation findings.

The Authority should disregard Meridian's aggressive and misleading PR response

The criticisms and statements Meridian has made about the Authority's work are cynical, solipsistic and ill-founded.

Meridian has attempted to paint the Authority's review as "confirm[ing] that high wholesale electricity prices over the last three years, reflect tight supply and demand conditions, and natural gas scarcity for electricity generation".¹¹

The Authority was very clear that while "Prices over the review period have, at least to some extent, reflected underlying supply and demand conditions ... some of the price increases since the Pohokura outage appear to be unexplained by the underlying conditions". The price increases that could not be explained were \$38/MWh. The Authority was also very clear "we observed some evidence to suggest that prices may not have been determined in a competitive environment" and "We observed some evidence to suggest that generators have an increased incentive and ability to exercise market power, and may have been doing so over the review period".

We also weren't able to reconcile the Meridian CEO claim "If we follow the Authority's thinking around the smelter exit contract, this has some seriously negative implications for new large electricity consumers, and our collective goal to create a zero-emissions economy with more opportunity for jobs"¹² with his claim that if NZAS was to exit "Following the transmission [upgrades] you would have seen a pretty quick supply side correction, and most likely, Huntly would have closed".¹³

⁷ The Meridian Chief Executive has claimed it was the Authority that was undermining confidence in the market: "To the extent there has been any loss of confidence in current market arrangements (and we do not believe there has been) we suspect the real cause to be the misreporting of the comments and figures in the Authority's preliminary decision": Meridian Submission: Preliminary decision on claim of an undesirable trading situation, 18 August 2020.

⁸ <https://www.energynews.co.nz/column/wholesale-prices/43428/lakes-are-near-full-gas-fields-are-back-operating-so-why-are-new>

⁹ <https://www.mbie.govt.nz/dmsdocument/4169-entrust-electricity-price-review-first-report-submission>

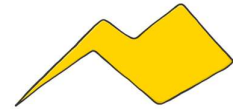
¹⁰ Haast previously provided submissions to the Electricity Authority/MDAG in support of Matt Rowe's analysis and conclusions. The Haast submissions also provide evidence which supports the Authority's wholesale market review findings:

- Critique of Concept's report "Review of impact of trading conduct enforcement action on spot prices", 2 December 2019.
- Rebuttal of Concept's report "Review of impact of trading conduct enforcement action on spot prices – addendum", 11 February 2020 (<https://www.ea.govt.nz/assets/dms-assets/26/26498Haast-Energy-Trading-11-February-2020.PDF>).

¹¹ <https://www.meridianenergy.co.nz/news-and-events/meridian-responds-to-electricity-authoritys-wholesale-market-review>

¹² <https://www.meridianenergy.co.nz/news-and-events/meridian-responds-to-electricity-authoritys-wholesale-market-review>

¹³ <https://www.nzherald.co.nz/business/households-paying-200-a-year-more-than-they-should-be-due-to-tiwai-contract-regulator-claims/QQSZLE3SR375YYHYIMDNL5B2KE/>



It isn't obvious how Meridian thinks bringing forward the closure of Huntly would have "seriously negative implications for ... our collective goal to create a zero-emissions economy". We don't buy into their green-washing.¹⁴

As well as suggesting the Authority's analysis and views were speculative and "incorrect", the Meridian CEO claimed the Authority's report had been written "in splendid isolation" from the electricity market and didn't reflect the "real world".¹⁵

The misleading and unfair way Meridian has attempted to frame the Authority's findings is consistent with the approach it took to the Authority's December 2019 UTS determination, where Meridian claimed the Authority had a "reform agenda", "bent the UTS rules to reach its desired results" and "helped to perpetuate ... myths".¹⁶

Having read all the Authority wholesale market review material, we could not find anything to support Meridian's criticisms about "tone and choice of language", "incorrect use of the information we have provided" or that "The Authority has either misunderstood or misinterpreted some of that information, rather than assessing it accurately and reasonably on its own terms".¹⁷

We won't be bullied by Meridian into staying silent about abuses of market power and nor should the Electricity Authority.

A competitive wholesale market creates a competitive retail market which benefits Kiwi households

Electric Kiwi has been the fastest growing electricity retailer since we took on our first customers in December 2014. Our customer base has grown to 76,000 or 3.5% of the market, which makes us the largest retailer not controlled by, or integrated with, a generator. Our customers have benefited from market leading offers and service, and collectively saved \$34 million in the last 7 years. We have been an aggressive price leader for the vast majority of this time which has pressured large retailers to lower their prices and resulted in significant savings for consumers in general.

Competition from innovative independent retailers like Electric Kiwi is critical for driving down retail electricity prices and the Government's goals of ensuring affordable electricity for Kiwi households and businesses, and electrification of the economy as part of the country's zero carbon ambitions.

As we have grown our ability to hedge at a reasonable price has been obstructed through a lack of access to equivalent contract terms with vertically-integrated counterparties. Combined with an extreme futures price environment, which in our opinion is not reflective of short or long-run generation costs, we've been forced to reduce investment in New Zealand and refocus on our Australian retail business where the wholesale environment is much more competitive and therefore reflective of underlying costs. This is not what we want for the Electric Kiwi brand or for Kiwi consumers.

We believe we are among the most efficient retailers in the market and have adopted a prudent hedge policy. We haven't been out competed but are being required to take these measures because regulatory and market failures have led to perverse market outcomes and rent seeking behaviour from large gentailers.

¹⁴ <https://www.nzherald.co.nz/business/luke-blincoe-an-open-letter-to-meridian-energy/GP3WXYWTW3HX7QOL36YZUSPNVQ/>

¹⁵ <https://www.nzherald.co.nz/business/households-paying-200-a-year-more-than-they-should-be-due-to-tiwai-contract-regulator-claims/QQSZLE3SR375YYHYIMDNL5B2KE/>

¹⁶ Meridian Submission: Preliminary decision on claim of an undesirable trading situation, 18 August 2020.

¹⁷ Meridian, Review of competition in the wholesale market from 2018 Pohokura outage to mid-2021, 24 September 2021.

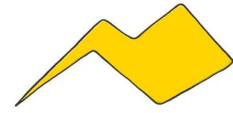
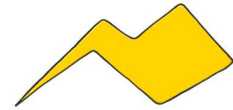


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Summary of Electric Kiwi and Haast Energy Trading's views

- **The Authority has found clear evidence of abuse of significant or substantial market power:** The Authority's investigation confirms our assessment "prices have materially increased for reasons other than hydrology and fuel prices, and that the most likely explanation for this change lies in bidding behaviour and trading conduct".^{18,19}
- **The Authority has identified evidence of market manipulation:** The Authority's findings of market outcomes that don't reflect "underlying [supply and demand] conditions", align with the ACCC's guidance²⁰ in relation to Court precedent on the definition of market manipulation:²¹

... market manipulation is centrally concerned with conduct, intentionally engaged in, which has resulted in a price which does not reflect the forces of supply and demand.

- **The overpricing due to the Tiwai contracts is only part of the story:** Thanks to the lack of competition amongst electricity generators, the wholesale price of electricity over the last 4 years has been nearly double what it used to be. Based on the Authority's modelling that could translate to \$2.4 billion per annum in over-pricing due to use of monopoly power.
- **The problems in the wholesale electricity market have put a handbrake on retail competition:** The review should also look at the harm suppliers with significant market power in one market may have in closely related and down-stream markets, including the harm monopoly pricing in the wholesale market is causing to competition in the retail markets.
- **Structural problems in the electricity market undermine NZ's climate change ambitions:** The problems the Authority has identified are becoming increasingly urgent and need to be resolved to support New Zealand's transition to a low carbon economy. The Authority should be looking at the harm monopoly conduct in the wholesale electricity market is causing to the environment, and to NZ's planned energy transition.²²
- **The break-up of ECNZ was a job half-done:** The breakup ECNZ and formation of new competing generators was sound, but the job was only half done. Meridian inherited 55-60% of New Zealand's hydro generation capacity, 35% of our generation supply and a position of significant market power. **Meridian is too large for effective competition to fully develop and thrive.**
- **Structural problems require a structural solution:** The Authority should recommend the Government adopt structural reform of the wholesale market. The Authority should avoid creating a situation where the Authority's review, which followed shortly on the heels of the Electricity Price Review, necessitates the Government establish yet another review to determine whether to undertake structural separation and what form that reform should take.
- **There is precedent for structural reform that can be drawn on:** The break-up of ECNZ, the ownership separation of lines from retail/generation, the asset swap between Genesis and Meridian, and the separation of Chorus and Spark all provide precedent for structural reform. The Electricity Industry Reform Act and telecommunications reforms, in particular, involved privately-owned assets.

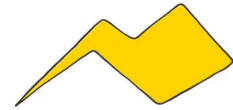
¹⁸ Haast, Rebuttal of Concept's report "Review of impact of trading conduct enforcement action on spot prices – addendum", 11 February 2020 (<https://www.ea.govt.nz/assets/dms-assets/26/26498Haast-Energy-Trading-11-February-2020.PDF>)

¹⁹ If the Concept Report prepared for the Electricity Authority/MDAG in 2019 is corrected for the modelling issues Haast identified it supports the Authority's wholesale market review conclusions, including that there has been a structural shift and spot prices cannot be fully explained by physical (i.e. non-behavioural) factors, including changes in hydro storage and gas prices.

²⁰ ACCC, Guidelines on Part XICA - Prohibited conduct in the energy market, May 2020.

²¹ See Director of Public Prosecutions (Cth) v JM (2013) 250 CLR 135 at [70].

²² New Zealand's climate change objectives have become a prominent part of the Authority's TPM review, and this should be mirrored in the wholesale market review.



- **The electricity market needs more generators that are able to actively compete:** Horizontal structural reform is essential to move beyond the failed attempt to use behavioural regulation (trading conduct rules) as a band-aid to deal with structural problems (concentration of generation ownership). There are various structural options which merit consideration. Our preferred option is to split out Manapouri and the Huntly coal assets into a new SOE (Kiwi Power).²³ Even the creation of just one new generator would make a big difference to competition in the electricity market.
- There are other options which merit consideration, and may be complementary, such as the Authority's suggestion that a cap be placed on the generation capacity of each electricity generator. We believe it would be desirable for Meridian to be prevented from owning or operating new firming generation including batteries.
- **The Tiwai contracts are an undesirable symptom of the underlying structural problems in the wholesale market.** The progression of the review of the Tiwai contract, ahead of the broader wholesale market review, has resulted in an imbalance where the focus of the consultation is on options for addressing the Tiwai contract even though this is simply a subset and symptom of the wider, larger wholesale problems.
- Again, the first best solution is structural. If the underlying structural problem is addressed, then there would be no need to consider options such as regulation of contracts and the Authority could instead leave it to the market to determine appropriate contractual arrangements with Tiwai and other large electricity users. This is consistent with the Authority's preference for market-based solutions over regulation.²⁴

The need to regulate Tiwai-type contracts should only be transitional, pending wider structural reform.

Structural problems require a structural solution

Electric Kiwi and Haast support structural reform to deal with the inherent structural problems in the electricity industry which are limiting both wholesale and retail competition.

Given the Electricity Authority has been clear structural options are outside its remit, it should recommend the Government adopt structural reform and provide evidence of the substantial downward pressure this would put on electricity prices.²⁵ Failure to provide a firm recommendation could result in the Government needing to undertake duplicate work, potentially with a Commerce Commission investigation a la retail fuel market and supermarkets, and further delay in resolving the situation.

There are various options which merit consideration. The Authority should model the expected outcomes against workably competitive benchmarks to determine the potential optimum configuration (including optimal number of new generators and which stations the incumbents should be required to divest).

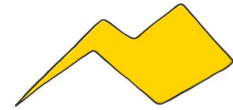
Our preferred structural solution – Kiwi Power

A relatively simple option is to split out Manapouri and the Huntly Rankine units and coal stockpile into a new SOE which we term Kiwi Power. The resulting generator would immediately have circa 1550 MW of capacity spread across both islands and increase spot market competition in absolute and locational terms significantly. This option has the advantage of only reorganising assets of government controlled gentailers.

²³ A requirement for Meridian to divest Manapouri only wouldn't go far enough.

²⁴ e.g. refer to the Authority's decision-making and economic framework used for distribution and transmission pricing.

²⁵ Consistent with the approach taken by the Commerce Commission in its retail fuel markets and supermarket studies.



Kiwi Power would control assets (the rankine units and coal stockpile) which can mitigate the looming mid-decade capacity shortage highlighted by Transpower in its recent security of supply report²⁶ and the ability to time their retirement following a potential Lake Onslow build. Additionally, Kiwi Power could consider deploying a battery at Huntly or Auckland to further support upper North Island capacity as required. We believe it will be undesirable from a market concentration perspective if Meridian is allowed to control additional battery capacity built in Auckland.

The Kiwi Power option has the benefit of taking the heavy burden of providing coal-fired firming off Genesis' hands and deliver it to the Government who incentivised to deliver firming solutions which meet the countries wider decarbonisation commitments.

Alternative structural solution – Kiwi Hydro

An alternative option would involve establishment of Kiwi Hydro SOE by splitting Manapouri away from Meridian and reorganising Contact's and Meridian's assets as follows:

1. Manapouri Power Station is moved from Meridian to Contact.
2. Contact's Clutha river and Lake Hawea assets including Clyde, Roxburgh and control gates are moved to Kiwi Hydro.
3. Meridian and Contact's Auckland Battery project is moved to Kiwi Hydro.
4. Kiwi Hydro Commits to build the Lake Onslow project and a large Auckland battery.

This option has the benefit of paving the way for Lake Onslow to be built and fully integrated operationally with the other Clutha river assets, as well as mitigating mid-decade capacity risks in the upper North Island by sizing the Auckland battery accordingly.

Whichever option is chosen, the new SOE should be excluded from entering the electricity retail market to increase the amount of generation available for development of a dynamic liquid hedge market and trade with large users, financial intermediaries, independent generators, and independent retailers.²⁷

In addition to the divestment of Manapouri in both the Kiwi Power and Kiwi Hydro options, we support a moratorium on Meridian building new dispatchable generation including batteries. There is precedent for a moratorium with the original ECNZ-Contact split in which ECNZ was precluded from investing in more than 50% of future generation capacity.

The Tiwai contracts are an undesirable symptom of the underlying structural problems in the wholesale market

Like the Authority and Entrust, we are troubled by the arrangements Meridian and Contact have in place for supply to Tiwai Smelter.

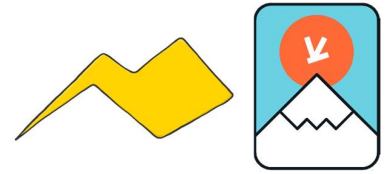
We raised these concerns with the EPR when the contract rate was reported to be 5c/kWh. Our concerns are only heightened now the contract rate is reported to be 3.5c/kWh.

We agree with the Authority "Both Meridian and Contact were able to profit from selling to NZAS because they benefit from increased revenue from the rest of New Zealand ... However, only a generator about the size of Meridian could sell to a customer on those terms ... these issues arise from the scale of generation (particularly in the South Island) ..."

²⁶ <https://www.transpower.co.nz/system-operator/security-supply/security-supply-annual-assessment>

²⁷ We also support consideration of vertical separation requires to split retail and generation, but recognise the benefit of vertical separation diminishes as market power issues in the wholesale and hedge markets are addressed.

One regrettable consequence of the Electricity Industry Reform Act was that it substituted lines-retail vertical integration for retail-generation vertical-integration. The Electricity Industry Reform Act does at least provide precedent for ownership separation, which could be applied to the 5 largest incumbent retailers, as well as how corporate separation and arms-length rules could be applied.



The Authority's observations simply serve to highlight the Tiwai contracts are a symptom of the underlying structural and competition problems in the electricity market, rather than the problem itself.

Again, the first best solution is structural.

If the underlying structural problem is addressed then there would be no need to consider options such as regulation of contracts and the Authority could instead leave it to the market to determine appropriate contractual arrangements with Tiwai and other large electricity users. Regulation of contracts may be a pragmatic option to introduce ahead of structural reform, if the regulation can be introduced more quickly and in time to prevent a repeat of the Tiwai issues after 2024.

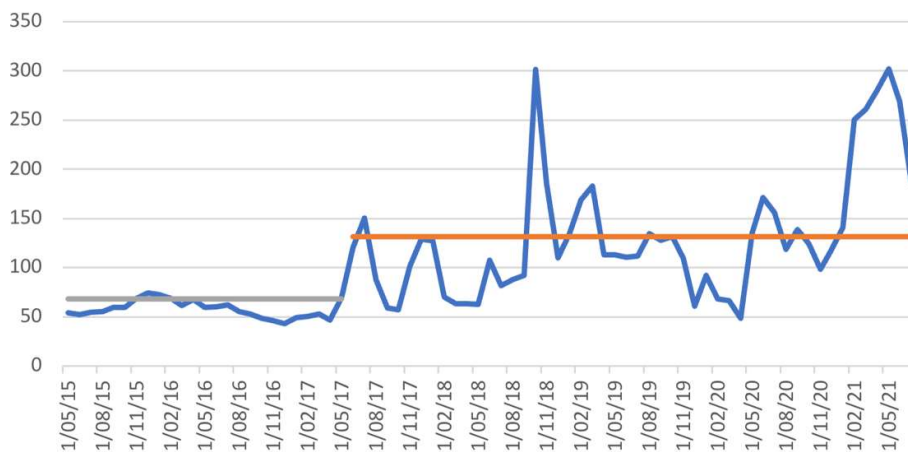
Market power is increasingly driving spot prices

The Minister of Energy has questioned whether wholesale electricity prices “need to be as high as they have recently been?” Another good question would be how high is too high or for too long?

Since the Minister asked the question, we have had new record prices for a three month period (\$281/MWh), six months (\$259/MWh) and the last 12 (\$190/MWh). You have to go back to June 2008 for a higher single month (\$309 v \$301)

Spot prices have averaged \$131 over the last four years. That's around twice their historic norm. Between 2009 and mid-2017 spot prices averaged \$68/MWh. Like with like comparison is a little bit more difficult, but if you look at the prices from October 1996 to mid-2017 they averaged \$62/MWh.

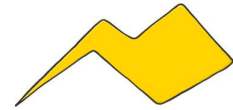
Monthly wholesale electricity prices



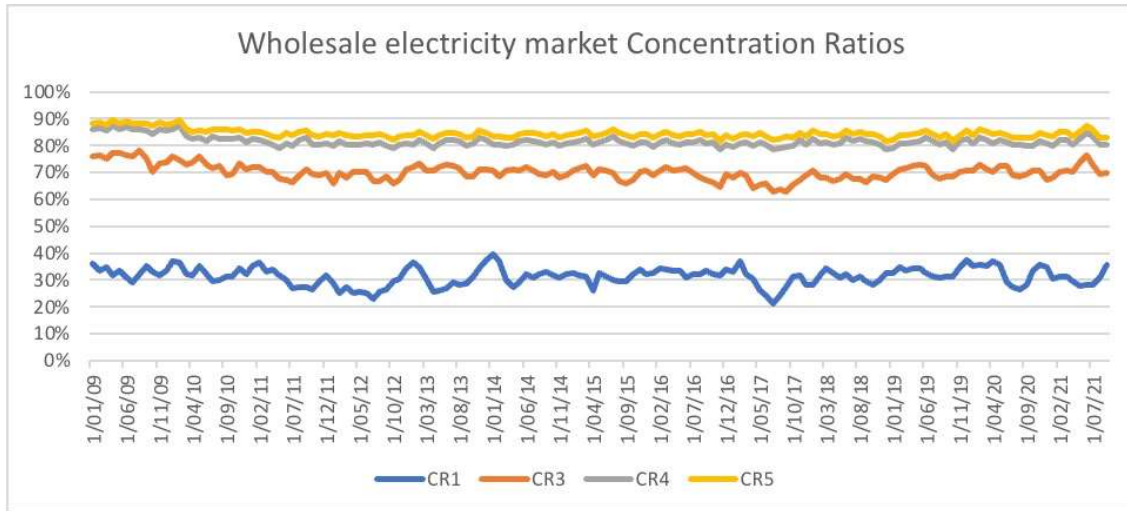
According to The Brattle Group, acting for Meridian, “The concentrated structure of the New Zealand market” results in prices deviating from cost. Meridian has similarly been clear “there are no requirements to offer based on costs” and it is “economically rational” for generators to seek to generate “at prices the market will support”.

The wholesale electricity market suffers from high levels of concentration and weak competition

The Authority's wholesale market review does not include concentration ratios even though this is a commonly used measure of market concentration. The wholesale market meets the Commerce Commission's definition of a concentrated market with the three largest generators (CR3) holding more than 70 percent market share.



The Concentration Ratio for the largest 4 generators (CR4) sits above 80%.

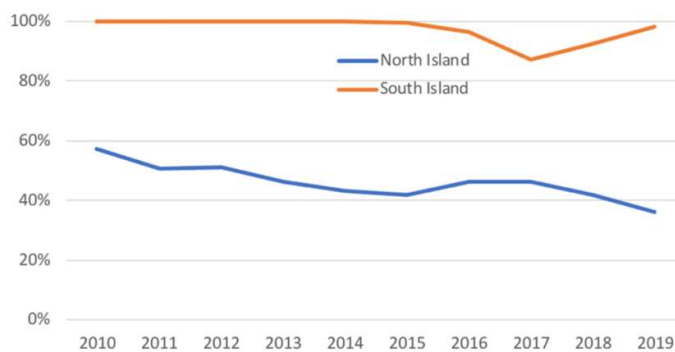


We agree with the Authority gross pivotal situations are part of the problem, and a useful measure of market power.

Consistent with this, we also agree with MDAG gross pivotal situations give rise to concerns about abuse of market power and not just net pivotal situations: “While a gross but not net pivotal supplier may not profit from raising prices in the short term, it may have incentives to raise prices (or create greater volatility) to increase hedge and/or retail returns over the longer term”.^{28,29} Basically, if you are gross pivotal you are in a position to increase prices by withholding generation capacity. We have seen this, for example, with Contact and Meridian unnecessarily spilling water as part of the December 2019 UTS.

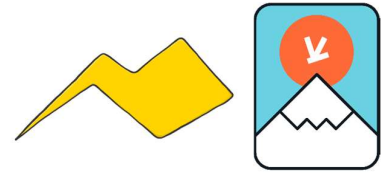
The figure below shows how much of the time a generator is gross pivotal on an aggregated basis (not just looking at each generator separately, as the Authority does in its consultation material).

Figure: Proportion of time large generators are gross pivotal at an island level across all trading periods (Source: Electricity Authority)



²⁸ MDAG, “HIGH STANDARD OF TRADING CONDUCT” PROVISIONS: A REVIEW BY THE MARKET DEVELOPMENT ADVISORY GROUP, DISCUSSION PAPER, 25 February 2020.

²⁹ We similarly also agree with Mercury that “During times when one party can become net pivotal in a constrained region purely through its own actions and without sanction, there is no short term supply side competition and consequently no competition ... The net pivotal party can squeeze the wholesale and hedge markets in the region ... The squeeze behaviour does lead to higher costs in the region (whether through wholesale or hedge market outcomes) which must through time be recovered from consumers in that region ...”. Mercury, UTS on 26 March 2011 - Cross submission in response to Submissions made 13 May 2011, 19 May 2011.



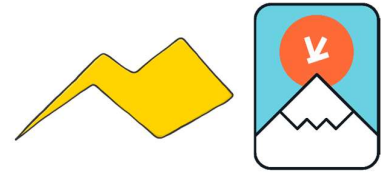
The Authority has documented well, albeit with unnecessary caution and qualifications, that the wholesale market is not fully or workably competitive, and there is evidence the market will further deteriorate. The Authority considers the large generators are “dominant” and have “control over substantial amounts of generation”.

We note and agree with the Authority, for example:

- **The market is concentrated:** “The HHI for generation in New Zealand has been hovering around 2,000 since 2014, with slight decreases when storage has been low”.
- “Meridian has 30 percent of the market-generating capacity (from its South Island hydro generation) but is needed to meet demand over 90 percent of the time”
- “Meridian ... was gross pivotal in the South Island around 77 percent of the time in each year from 2016 to 2018. This increased to around 90 percent to 95 percent in 2019 to 2021 (to 30 June).” This means that 90 to 95% of the time Meridian has market power enabling it to set the spot price by withholding electricity capacity or raising offer prices (which the Authority describes as “economic withholding). We saw this vividly in December 2019 when the Authority found Meridian (and Contact) unnecessarily spilt water resulting in higher spots and an Undesirable Trading Situation.³⁰
- **There is evidence of market manipulation:** “Differences in price between the North Island and South Island have been subdued over the review period when storage has been high. This suggests some generators may have been economically withholding so the price they pay to cover their retail books in one island is not much higher than the price they receive for their generation in the other.”
- Between 3 – 17 December 2019, “ ... Meridian’s use of what it terms ‘non-clearing tranches’ means that generation is effectively withheld from the market” and “the average extra generation Meridian could have achieved is 82MW, and around one-third of the spill at Benmore could have been sued to generate. We estimate the spot market impact of this was \$70m”.
- Generators may be willing to subsidise NZAS because its demand increases national prices and spot market revenues by as much as \$850 million per year, more than offsetting the cost of the subsidy.”

³⁰ The Authority found that Meridian (and Contact) didn’t breach the high standard of trading conduct rules that existed at the time because it was “shielded” by the safe-harbour provisions which existed at the time. Meridian unsuccessfully complained to the Broadcasting Standards Authority when Radio NZ correctly made the point that Meridian got off on a “technicality”.

The Trading Conduct rules have been amended to remove the safe-harbour provisions and this loophole.



Russell McVeigh has usefully provided examples of market manipulation relevant to the Authority's wholesale market review:³¹

- (a) **Withholding capacity:** If the capacity could not have profitably been withheld in a competitive market, withholding the capacity from the market is likely to breach the new test. The European Commission ("EC") has investigated generators in the EU for abusing their dominance by withholding capacity, with any potential losses from that withheld capacity recouped through obtaining higher prices for the capacity that was dispatched.³⁷ This is consistent with the safe harbours in the current Code, which requires generators to offer all of its generating capacity that it is able to operate in a trading period.³⁸
 - (b) **Excessive offer prices.** Excessive offer prices are likely to breach the new test if such prices would not have been possible or profitable in a workably competitive market. The EU prohibition of market manipulation prohibits pricing wholesale energy products at an "artificial" level.³⁹ European case law and guidance has determined that artificiality considers whether prices "correspond to available production capacity or to fundamental market data".⁴⁰ This includes considering:
 - (ii) the capacity of the generator to offer more electricity. This is linked to (a) above;
 - (iii) the demand for electricity at the point in time that prices increased (i.e. can the increased offer prices simply be attributed to perceived increased demand); and
 - (iv) any justifications offered by the defendant as to why prices had increased.
- **Abuses of market power are getting worse:** e.g. "Prices have been higher since the Pohokura gas field outage in 2018, and some of the increase may not be explained by underlying conditions". The Authority's finding that there has been a structural shift in prices since the Pohokura gas field outage in 2018 confirms the earlier conclusions of Matt Rowe that there has been a significant structural shift in electricity spot prices that is not explained by changes in market fundamentals.³²
 - "We observed some evidence to suggest that generators have an increased incentive and ability to exercise market power, and may have been doing so over the review period."
 - "[Meridian] has a large percentage of offers in its top tranche, even when storage is higher (and its offers over \$300/MWh have been steadily increasing since 2014)."
 - **The level of market concentration will get worse not better:** "The HHI for generation ... may increase with the recent announcements by Contact and Meridian regarding investment in Tauhara and Harapaki, respectively, and Mercury developing Puketoi and Turitea, and acquiring Tilt's New Zealand generation assets."

Electricity retail markets are not any more competitive than wholesale

It is well documented that the retail electricity market, whether defined on a regional or national basis, is either concentrated or highly concentrated (e.g. national average HHI = 2,080 as at 31 November^{33,34}). It is important not to be beguiled by the large number of retailers (40) in electricity retailing across New Zealand:

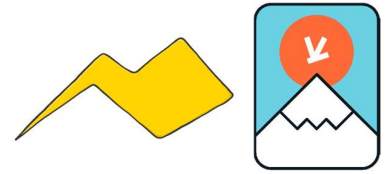
- Over 30% have less than 10 customers;

³¹ <https://www.ea.govt.nz/assets/dms-assets/26/26735Meridian-submission-MDAG-HSOTC-discussion-paper.pdf>

³² <https://www.energynews.co.nz/column/wholesale-prices/43428/lakes-are-near-full-gas-fields-are-back-operating-so-why-are-new>

³³ https://www.emi.ea.govt.nz/Retail/Reports/R_HHI_C?DateFrom=20170601&DateTo=20211130&RegionType=NZ&si=v|3

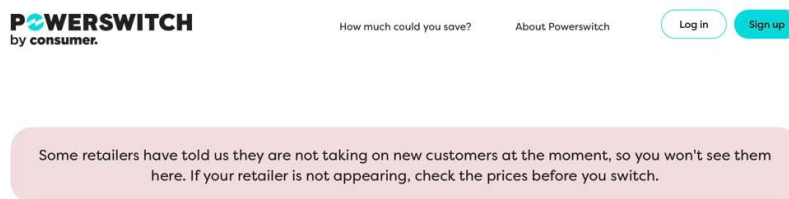
³⁴ As of 1 January 2021, the residential HHI was 2,150 and the SME HHI 2,627.



- 60% have less than 100 customers; and
- Three-quarters have less than 3,000 customers.

We agree with the EPR Panel observation that “the wholesale contract market isn’t working effectively, limiting the ability of independent generators and retailers to manage price risk and undermining confidence in the market”. Since the completion of the EPR, the wholesale market situation has deteriorated with unprecedented high spot prices, further limiting the availability of hedging arrangements (including availability at reasonable prices) that would enable independent electricity retailers to compete on a level playing field.

It has been well publicised a number of independent retailers withdrew from Powerswitch due to a lack of availability of reasonably priced hedging arrangements.³⁵



Potential new retailers such as Octopus have delayed entry for the foreseeable future.

While the Electricity Authority has suggested, as evidence of improved competition, that “At the end of November 2020, small and medium retailers collectively served 15.6 per cent of ICPs in the market, overtaking Mercury who supplies 15.5 per cent. In aggregate, small and medium retailers now supply the third-largest number of consumer connections with only Genesis and Contact supplying more”³⁶ the situation has deteriorated and the aggregate ‘3rd place’ was short-lived.³⁷ Since March 2021 the small and medium sized retailers’ aggregate market share has been decreasing.³⁸

³⁵ <https://www.tvnz.co.nz/one-news/new-zealand/electricity-prices-getting-less-competitive>

³⁶

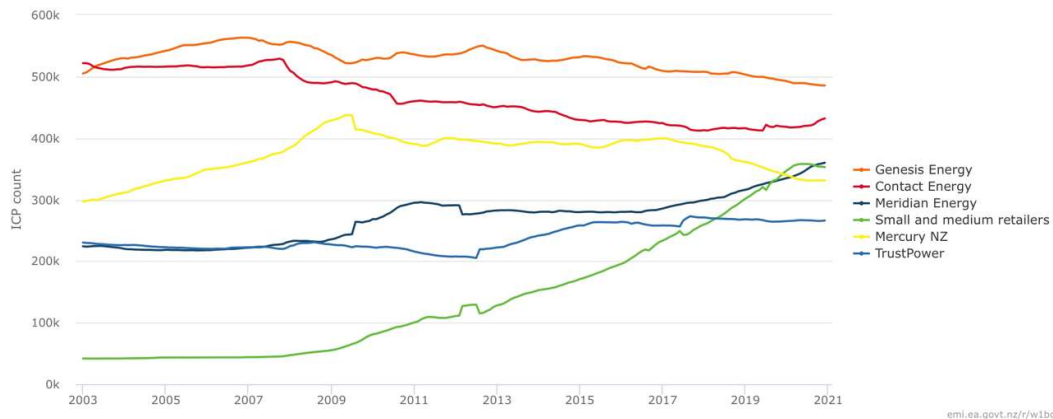
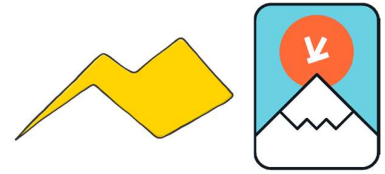
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³⁷

https://www.emi.ea.govt.nz/Retail/Reports/R_MST_C?Grouping=T5&MarketSegment=All&ParentCompany=Y&Percent=N&RegionCode=NZ&RegionType=NZ&sdr=ALL&si=frj1081.frc|D.v|2

³⁸

https://www.emi.ea.govt.nz/Retail/Reports/R_MST_C?Grouping=T5&MarketSegment=All&ParentCompany=Y&Percent=N&RegionCode=NZ&RegionType=NZ&sdr=ALL&si=frj1081.frc|D.v|2

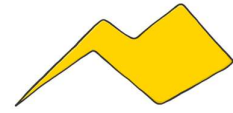


In the last two years, we have seen the smallest reductions in market concentration since the formation of the Electricity Commission two decades ago with 2021 projected to be even worse.³⁹

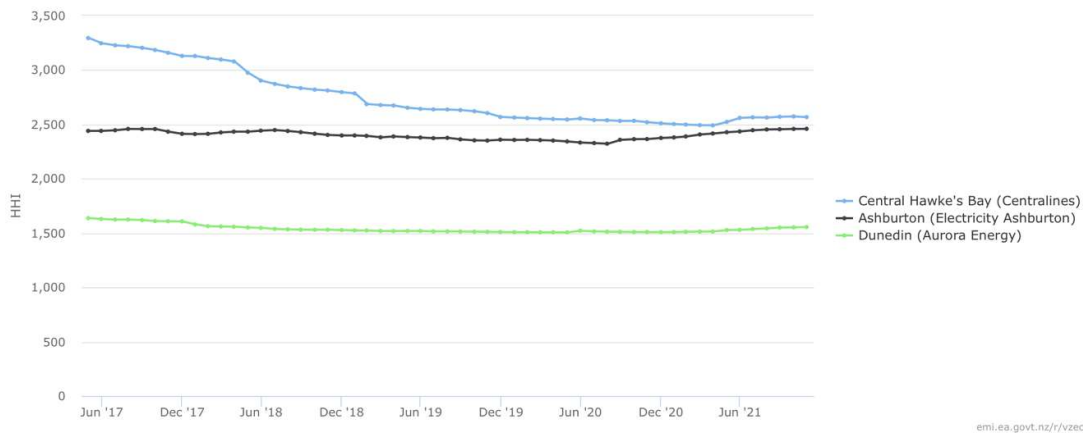
There are signs emerging of the trend in market concentration levels starting to reverse and worsen, particularly in the South Island. The reversals may be modest so far but should be seen as a warning for the direction competition is heading in the electricity market. It is no longer safe to simply rely on continuous, albeit modest, improvements in competition statistics:

- **The 5 largest incumbents’ market share is growing for the first time in two decades:** Since April 2021, the aggregate market share of the 5 largest incumbent retailers has been increasing nationwide.
- **South Island market concentration is getting worse:** Since January 2021, the HHI and CR1 for the South Island overall has deteriorated. The CR3 has deteriorated since December 2020.
- **South Island generation dominance is being mirrored in retail:** The two largest generators in the South Island, Contact and Meridian, are rapidly becoming the two largest retailers in the vast majority of network reporting areas:
 - In 2000, Contact and Meridian were the two largest retailers in just 4 of the 16 South Island network reporting areas. This has now risen to 8 and is likely to become 10 in the near to medium term.
 - In 2000, either Contact or Meridian was the largest retailer in 8 of the network reporting areas. This has now risen to 12 and likely to become 14 in the near to medium term.
 - The only South Island network reporting areas where Contact or Meridian are not the largest are Malborough (Meridian is on track to overtake Trustpower as largest retailer), Buller (Pulse Energy is the largest retailer) and Westport (Trustpower is the largest retailer, with Contact and Meridian in 2nd and 3rd place, respectively)
- **There are worrying signs in recent changes to market concentration:** The HHI deteriorated in 16 of the 39 network reporting regions in the last 3 months, and in 15 over the last 6 months. This included a deterioration in 12 out of the 16 South Island network reporting regions in the last 3 months, and 11 over the last 6 months.
- The warning signs for the deteriorating state of retail competition are highlighted by Ashburton where HHI market concentration is now higher than it was four years ago, Dunedin where the HHI

³⁹ Based on market concentration statistics collected and published by the Electricity Authority from 2003 onwards.



is the highest since June 2018, and Central Hawke's Bay where the HHI is the highest since December 2019.⁴⁰



- Market Concentration Ratios show similar signs of deterioration in retail competition.
- The CR3 for New Zealand has slightly deteriorated since May 2021.
- The CR3 deteriorated in the 16 out of 39 of network reporting regions in the last 3 months, and 17 over the last 6 months. This included a deterioration in the majority (10 out of 16) of South Island network reporting regions in the last 3 months, and 11 over the last 6 months e.g. Dunedin where the CR3 is the worst it has been in 4 years.⁴¹



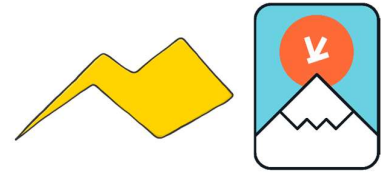
- The CR1 deteriorated in the 13 out of the 39 of network reporting regions in the last 3 months, and in 12 over the last 6 months. This included a deterioration in 8 out of the 16 South Island network reporting regions in the last 6 months e.g. the largest retailer in Ashburton has been

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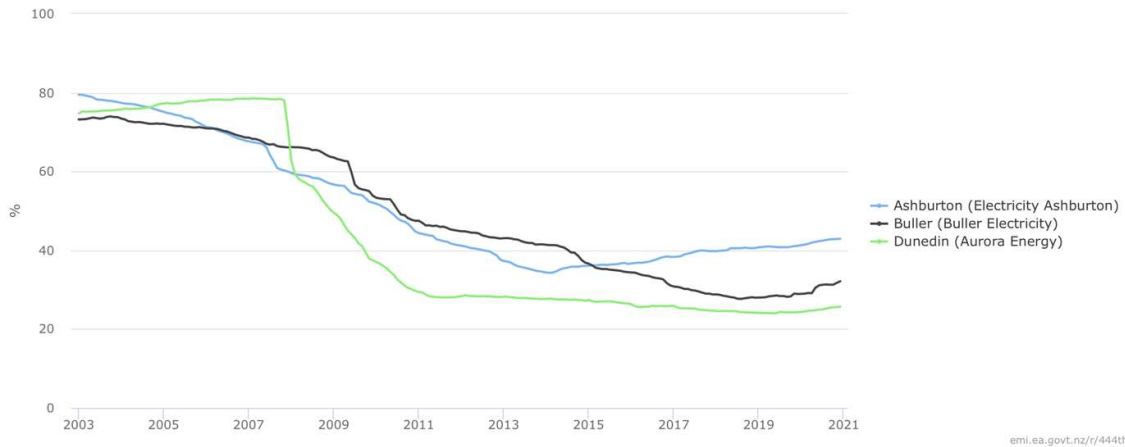
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https://www.emi.ea.govt.nz/Retail/Reports/R_CR4_C?DateFrom=20040101&DateTo=20211130&RegionType=NWK_REPORTING_REGION_DIST&CRLevel=3&rsdr=ALL&seriesFilter=37&si=v|3



increasing in market share for nearly 7 years, in Buller the CR1 is the worst it has been in 4 years, and in Dunedin it is the worst it has been since the end of 2017.⁴²



Lower and more affordable prices for Kiwi households and businesses are the main benefit from competition

The Authority’s wholesale market review limits the calculation of consumer detriments to narrow efficiency-only.

The harm to consumers from an oligopolistic market and exploitation of market power arise from high spot prices and will substantially dwarf any likely efficiency impacts.

This is reflected in the Authority’s estimate the Tiwai contracts result in “potential efficiency costs ... around \$57 million to \$117 million per year” but the harm to consumers amounts to increases in “national prices and spot market revenues by as much as \$850 million per year”. The Authority noted “there is ... a wealth transfer ... from consumers to generators, of around \$729 million per year, that greatly out-weighs the efficiency losses for generators, providing incentives for the agreement”.

If prices are \$850 million higher than they should be (or \$200 per household) consideration of whether “electricity is going to consumers with the highest valued use” is not likely to be highest in consumer concerns or long-term interests. This excludes the additional \$1.6 billion per annum (\$38/MWh) the Authority wasn’t able to explain or justify based on supply and demand conditions.

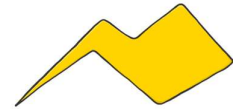
We agree with Duignan Munro that “in the short-term price elasticities are small and thus the inefficiency effects of price discrimination are small relative to the wealth transfer effects” and “The valuation of the inefficiency effects is not able to reflect longer term implications”.⁴³

Electric Kiwi and Haast agree with the comments made by John Stephenson (Sense Partners) as part of the work Sense Partners is doing for the Authority on the TPM: “If all prices fell by \$10 then people could e.g. (a) work less and enjoy the same consumption benefits (b) save and invest in something without foregoing any of their consumption benefits (c) buy more of something else to use/consume. So even if they have zero elasticity in the market in question there is still scope for a substantial welfare improvement ...”.⁴⁴

⁴² https://www.emi.ea.govt.nz/Retail/Reports/R_CR4_C?DateFrom=20040101&DateTo=20211130&RegionType=NWK_REPORTING_REGION_DIST&CRLevel=1&seriesFilter=27,31,37&rsdr=ALL&si=v|3

⁴³ Munro Duignan Limited, Review of the Electricity Authority discussion paper “Inefficient Price Discrimination in the wholesale market – issues and options”, 22 October 2021.

⁴⁴ <https://www.ea.govt.nz/dmsdocument/25805-4-11-fw-fw-wealth-transfers-in-the-tpm-cba>



This is not a “zero-sum” game from a New Zealand Inc perspective and it is our view that the effects of this wealth transfer are extremely harmful, now more than ever in an environment of cost inflation and widespread energy poverty.

The Authority’s Strategy development: Final strategy framework noted “There is clear support from stakeholders for us to review our interpretation of our statutory objective, especially given the length of time that has elapsed since the original interpretation was released” and that “We intend to commence this review in the 2020-21 Financial Year”.⁴⁵ The Authority has not provided an update on this project. We are not aware of this work commencing yet, despite it being nearly half-way into the 2021/22 financial year.

Next steps in the wholesale market review

The work the Authority has undertaken so far is more than sufficient to establish there are substantial, structural problems in the electricity market, that are harmful to competition, the efficient operation of the electricity market and the long-term interests of consumers, as well as prima facie evidence of possible Commerce Act breaches.

It is clear the issues the Authority is confronting should be prioritised and addressed at pace. The Authority’s requirements on Transpower for development a new TPM (slightly over 12 months in total) provides a suitable benchmark for the rate at which the wholesale review should be undertaken and completed.

Different aspects of the review have been progressed at different rates, with the Authority’s investigation into the Tiwai contract much more advanced than the overall consideration of competition problems in the wholesale market. The most important element of the review is consideration of the options under “Other options that could be considered”. The discussion on “Other options” is high-level and focussed on possible negative aspects of the options and the “significant implications for [the] companies”, rather than their pros and cons which should include increased competition and lower, more efficient and affordable prices.

The suggestion that “One difficulty” with structural reform and break-up of the generators “is that there may be fixed costs or overheads that create economies of scale, and these economies could be lost” is tantamount to suggesting the optimal market structure is an oligopoly and the Authority should not promote competition.

Even though “Addresses root cause of inefficiency and any competition concerns” is included in the Authority decision criteria, for example, this is not considered in the options evaluation.

Vertical separation of generation and retail businesses is not considered at all, but this seems to be because the Authority hasn’t considered the downstream, retail market, impacts of market power in the wholesale market.

This imbalance needs to be addressed as the appropriate solutions to competition problems in the wholesale market should eliminate incentives for Tiwai-type contracts.

Enhancements to the Authority modelling

The Authority has made a good start with its modelling of the problems in the wholesale market; particularly on how it has played out with the Tiwai contract, but the depth of the review modelling can be improved, and there are a number of areas where the analysis can be enhanced:

⁴⁵ Electricity Authority, Strategy development Final strategy framework: Feedback paper, 7 July 2020.



- **The duration of the analysis needs to be extended:** We believe modelling should be performed for the existence of the market and not just assume that pre-2019 the market was workably competitive.

The Authority should not limit itself to “look[ing] at whether prices over the review period (January 2019 to June 2021) were determined in a competitive environment, for the long-term benefit of consumers” but consider the entire period the Authority has been in existence or since the break-up of ECNZ.

For example, the Authority has identified evidence of offer prices well above workably competitive levels well before the Pohukura outage or the latest iteration of the Tiwai contracts were negotiated e.g. “the percentage of higher priced offers for Meridian’s Waitaki hydro stations has been increasing gradually since 2014”. This should help confirm the extent to which prices have exceeded economic cost by too much and for too long.

Implicit in some of the Authority’s analysis is that the pre-2019 period represents a period of acceptable competition. We disagree. The market was significantly oversupplied in the 10 years following the global financial crisis. Many generators over estimated electricity demand and committed to new generation that wasn’t needed. In a competitive market this should lead to below average prices and returns for generators, but the period saw average spot and forward prices close to the long-run marginal price of new generation throughout. A market where cyclical troughs lead to fair economic returns, and cyclical peaks lead to super profits is clearly not competitive in the way most economist would describe it. The work of MEUG, Poletti and Wolak have all showed supernormal profits in the pre-2018 period. The Authority’s modelling should not use the pre-2018 period as the proxy for workable competition. First principles analysis such as that carried out by Wolak and Poletti is the best method to establish the level of competition in the spot market.

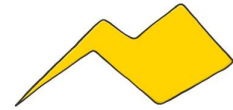
- **The Pohokura outage shouldn’t necessarily be considered as the single “break-point” as changes in market behaviour have also occurred gradually over time** (especially subsequent to warning notices being sent to gentailers for trading conduct issues).

For example, Matt Rowe suggested the Authority’s decision in May 2017 to send Meridian a warning letter rather than taking enforcement action for breach of the Code may have had “the unintended consequence of [causing] ongoing higher prices” while, in response, Concept suggested “the breakpoint [may have] actually occurred in February 2017, before the letter to Meridian was sent or published”.⁴⁶

- **Adjust the modelling to account for the impact that electricity prices can have on gas prices**, and not just the other way around. We expect this will demonstrate that less of the spot prices are explainable by legitimate supply and demand conditions, and more by market power problems.⁴⁷
- **Take into account downstream and environmental impacts:** Broaden the consideration of the harm caused by competition problems in the wholesale market, to also consider the impact on downstream markets such as the electricity retail markets and implications for the transition to a decarbonised economy and electrification.
- **Expected outcomes for workably competitive markets should be modelled to determine the optimum configuration of the wholesale market.** In our view, the two superior scenarios for structural reform are:

⁴⁶ Concept Consulting, Review of impact of trading conduct enforcement action on spot prices, August 2019.

⁴⁷ We have raised this previously. For example, in work undertaken by Concept for MDAG on the Trading Conduct Review, Concept found that electricity prices were structurally higher after May 2017 but attributes this to changes in gas prices and hydro storage, because it didn’t take into account that electricity prices affect gas prices. At the time, Haast provided modelling analysis, including Granger Causality test, which demonstrated this impact. Haast, Critique of Concept’s report “Review of impact of trading conduct enforcement action on spot prices”, 2 December 2019.



1. Creating an independent generator SOE owning Manapouri and the Huntly Rankine units;
OR
2. Moving Manapouri from Meridian to Contact and creating an independent generator SOE owning Contact's Clutha and Hawea assets and a grid-scale battery in Auckland.

We agree with Meridian “workable competition is the correct interpretation of the Authority’s statutory objective”.⁴⁸ The High Court has provided useful precedent for how a workably competitive market benchmark should be set and was clear “In a workably competitive market no firm has significant market power and consequently prices are not too much or for too long significantly above costs”.⁴⁹

- **Other considerations:** Include forecasts of HHI and Concentration Ratios for the next decade. The Authority’s analysis includes qualitative commentary only that market concentration will get worse.
- Review the Tiwai contract modelling against previous modelling work that has been done on the impact of the Tiwai contract on electricity prices. As we have discussed with the Authority, we consider that this will provide support for the Authority’s modelling.

Concluding remarks

About 15 years ago, Telecom wasn’t delivering the broadband that New Zealanders wanted or deserved, and so government directed that it split its retail and its wholesale up and access arrangements for independent retailers were overhauled.

The result has seen a more competitive telco sector, and better service to Kiwis.

Investment has flourished, with large commitments to upgrade to (now) 5G mobile and fibre roll-out etc.

Electric Kiwi and Haast want to see Kiwis benefit from competition developing and flourishing in the electricity market as well. We are doing our bit, but the market power of the large generators and the resulting flawed wholesale market are acting as a handbrake on our ambitions.

The time for tinkering is over. The Authority should recommend the Minister pursues structural reform of the generation market.

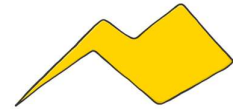
Recommended solutions for reform of the electricity industry

- Electric Kiwi and Haast support structural reform to deal with the inherent structural problems in the electricity industry limiting competition.
- Our preferred option is to split out Manapouri and the Huntly coal assets into a new SOE (Kiwi Power).⁵⁰ Even the creation of just one new generator would make a big difference to competition in the electricity market.
- An alternative option would involve establishment of Kiwi Hydro SOE by splitting Manapouri away from Meridian and reorganising Contact's and Meridian's assets as follows:
 - Manapouri Power Station is moved from Meridian to Contact.
 - Contact's Clutha river and Lake Hawea assets including Clyde, Roxburgh and control gates are moved to Kiwi Hydro.
 - Meridian and Contact's Auckland Battery project is moved to Kiwi Hydro.
 - Kiwi Hydro Commits to build the Lake Onslow project and a large Auckland battery.

⁴⁸ <https://www.ea.govt.nz/assets/dms-assets/26/26735Meridian-submission-MDAG-HSOTC-discussion-paper.pdf>

⁴⁹ WELLINGTON INTERNATIONAL AIRPORT LTD & ORS v COMMERCE COMMISSION [2013] NZHC [11 December 2013].

⁵⁰ Kiwi Power would provide a natural home for Project Onslow.



- There are other options which merit consideration, and may be complementary, such as the Authority's suggestion that a cap be placed on the generation capacity of each electricity generator. In particular we believe it would be desirable for Meridian to be prevented from owning or operating new firming generation including batteries.
- Whichever option is chosen, the new SOE should be excluded from entering the electricity retail market to increase the amount of generation available for development of a dynamic liquid hedge market and trade with large users, financial intermediaries, independent generators, and independent retailers.⁵¹
- Regulation of contractual arrangements with Tiwai and other large electricity users may be a pragmatic option to introduce ahead of structural reform, if the regulation can be introduced more quickly and in time to prevent a repeat of the Tiwai issues after 2024.

Yours sincerely,

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⁵¹ We also support consideration of vertical separation requires to split retail and generation but recognise the benefit of vertical separation diminishes as market power issues in the wholesale and hedge markets are addressed.

One regrettable consequence of the Electricity Industry Reform Act was that it substituted lines-retail vertical integration for retail-generation vertical-integration. The Electricity Industry Reform Act does at least provide precedent for ownership separation, which could be applied to the 5 largest incumbent retailers, as well as how corporate separation and arms-length rules could be applied.