Meridian.

Meridian cross submission

Proposed actions to correct 2019 UTS

19 May 2021

This cross-submission by Meridian Energy Limited (**Meridian**) responds to submissions received by the Electricity Authority (**Authority**) in response to its consultation paper *Proposed Actions to Correct Undesirable Trading Situation 2019* (**actions to correct paper**).

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Nothing in this submission is confidential.

Executive Summary

The submissions received by the Authority on its proposed actions to correct the 2019 UTS support Meridian's position in its initial submission.

All participants that submitted indicated a preference for a market-based resettlement using the scheduling, pricing, and dispatch tool (SPD) to re-solve each trading period with offer adjustments in place. This would be far superior to any off-market adjustment to prices or settlement directly, which would not restore the normal operation of the market.

Unsurprisingly, submitters expressed a range of views on the level to which offers should be adjusted for resettlement purposes. The complainants and unhedged purchasers have a commercial incentive to seek the lowest possible offer cap, regardless of the extent to which that would reflect the normal operation of the market. Other submitters agree with the Authority's preferred option, while some suggest a higher offer cap that takes into account the incentives a cap might establish for the management of hydro storage.

Nothing in the submissions made by others alters Meridian's view that the appropriate offer cap lies somewhere in the range of:

- $19.98 / MWh – to the extent the Authority wants an action to correct that is a back solve to deliver a physical outcome (28 GWh of additional South Island hydro generation) then Meridian accepts that an offer cap at this level would achieve the outcome sought and be consistent with the Authority's analysis to date;
- to $29.59 / MWh based on the normal operation of the market and offers made during similar hydrological conditions (the median historical daily price in the lower South Island when South Island hydro storage is above the 99th percentile).

Meridian's view is that $29.59 / MWh would be more consistent with the normal operation of the market in similar conditions. However, a cap of $19.98 / MWh at least reflects a reset price that would have delivered the additional 28 GWh of hydro generation that the Authority found could have been generated but for the UTS. It is not clear to Meridian why one of these two options was not preferred by the Authority.

Whatever offer cap the Authority decides to apply must be at a level that:

- is consistent with the Authority's analysis to date;

- would have resulted in an outcome that the Authority has shown to be feasible in the real world bearing in mind resource consents, hydrology, and market and operational constraints; and
- corrects the UTS identified by the Authority and restores what the Authority found was likely to be the normal operation of the market.

An offer cap at $13.70 / MWh does not satisfy these criteria for the reasons given in Meridian's initial submission. In short, it is inconsistent with the Authority's analysis to date as it results in reduction of spill at a level greater than the Authority calculated was physically and legally feasible, which results in "over-correction" of the UTS identified by the Authority.

Some submitters misapply the UTS provisions in the Code in an attempt to assign blame or punish particular parties for the UTS. However, the UTS regime is not designed as a substitute for enforcement action to punish, compensate for, and deter breaches of the Code by individual participants. The Code breach process considers the conduct of an individual market participant whereas the UTS regime is focused on swiftly correcting a situation that has arisen in the market. The suggestion by some parties that penalties be imposed as part of the UTS actions to correct not only misconstrues the UTS provisions, it directly contradicts the fact that no party has been found to have breached the Code.

Regarding the treatment of derivatives, there is broad concern amongst submitters that the actions to correct will create a split market with divergent settlement of different aspects of the market. This decoupling of final spot and hedge market outcomes could:

- have implications for the overall integrity of the hedge market as the intention of hedge contracts would be undermined; and
- result in significant uncertainty and loss of confidence in the wholesale market as participants will not know how to manage this new risk of decoupled price outcomes now or in the future.

These and similar concerns are expressed by a wide range of participants. These submissions support Meridian's position that a principled action to correct would be to ensure that the revised final prices also flow into the settlement of derivatives to the greatest extent possible so that hedge markets are "allowed to fully carry out their role of managing risk."[1] Meridian therefore continues to consider the best option to be a direction from the Authority that all derivative contracts between participants resettle based on the revised spot prices.

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[1] Proposed actions to correct, page iv.

Meridian has considered the submission from the ASX and urges the Authority and ASX to work together to deliver a resettlement that reflects the normal operation of the market and prevents the decoupling of final spot and hedge market outcomes. Meridian considers this outcome to be achievable and that it would be consistent with the ASX operating rules, which enable the ASX to amend any transaction and direct that products settle at a different price to ensure the market is "fair, orderly, and transparent"[2].

[2] ASX Operating Rules, Rule 3100, available at: https://www2.asx.com.au/content/dam/asx/rules-guidance-notes-waivers/asx-operating-rules/rules/asx_or_section_03.pdf

Table of contents

Actions to correct must reflect normal market operations..7

There is clear support for an SPD-based market resettlement 7

Any offer cap must reflect the normal operation of the market and not result in infeasible outcomes 7

Any SRMC based offer cap would not reflect normal market operations, result in a feasible outcome, or be consistent with the Authority's analysis to date 8

As expected, some submitters claim 'conservative' modelling justifies an infeasibly low offer cap...9

Other submitters support a higher offer cap 10

The offer cap should apply to the stations identified by the Authority 11

Some submitters misapply the UTS provisions...14

Seeking to punish or apportion blame is not the purpose of the UTS regime 14

Full wholesale market resettlement should be the goal 16

Under the normal operation of the market, everything settles based on final prices 16

The Authority should work with the ASX to deliver full resettlement 17

The timeframes to consider the UTS have created the risk of decoupled spot and hedge prices 18

Actions to correct must reflect normal market operations

There is clear support for an SPD-based market resettlement

The participants that submitted supported the Authority's preferred option to correct the UTS by adjusting offers and recalculating final prices in the electricity market.

As Meridian noted in its submission, adjusting offers and using SPD to recalculate final prices would produce the outcome most closely aligned with the normal operation of the market and would properly account for nodal prices and the complexity of losses and constraints. Any off-market action to correct would deviate from the normal operation of the market. We agree with the NZX that:[3]

> "The SPD model is an established tool in the electricity market to set final prices, with its formulation being set out in the Code and it being subject to regular audits. And while noting that SPD is a model that approximates real time conditions on the grid, for any given set of inputs, SPD does produce results that are of high integrity and promote participant confidence in the final price setting process."

Any offer cap must reflect the normal operation of the market and not result in infeasible outcomes

To reiterate, Meridian's submission is that the actions to correct should be consistent with the analysis in the UTS Final Decision Paper. That analysis estimated 28 GWh of "excess spill" for the period 3 to 27 December 2019[4] and then used vSPD to estimate the offer level that would result in the dispatch of an additional 28 GWh of hydro generation in the South Island. The preliminary decision paper referred to the vSPD reset as a "single offer price", while the final decision paper referred to this as an "average" offer of $13.70 / MWh for South Island hydro stations from 3 to 27 December 2019.[5]

Instead of resetting offers at a single price point or to deliver an average price of $13.70 / MWh, the Authority now proposes to apply a price *cap* to hydro generation offers from

[3] NZX, page 1–2.
[4] See paragraph 7.64(b) of the final decision paper.
[5] See paragraph 14.16 of the preliminary decision paper and paragraph 7.67 of the final decision paper.

Waitaki and Clutha stations. The effect of an offer *cap* is significant. A cap at $13.70 / MWh would have resulted in a lower average offer price or single offer price equivalent over the period of the UTS and, in the real world, would have resulted in the dispatch of around 30 percent more South Island hydro generation than the Authority previously calculated was feasible while respecting Resource Management Act and other constraints.

To achieve the hydrological outcome sought by the Authority, either all offers need to be reset at $13.70 / MWh or a cap should be applied that delivers an average offer price of $13.70 / MWh. This seems to be the effect of the $19.98 / MWh offer cap included in the proposed actions to correct paper and referenced throughout Appendix A. The $19.98 / MWh offer cap would result in the dispatch of the 28 GWh of additional hydro generation sought and it is not clear to Meridian why the Authority has not selected this as the preferred option, consistent with its earlier decision.

To the extent the Authority wants an action to correct that is a back solve to deliver a physical outcome, Meridian accepts that a $19.98 / MWh offer cap would achieve the hydrological outcome sought. However, that is an academic modelled outcome. It would be more consistent with the real world normal operation of the market to adjust offers based on the offers made during similar hydrological conditions. According to the Authority, the median historical daily price in the lower South Island when South Island hydro storage is above the 99th percentile is $29.59 / MWh. Basing an action to correct on the prices (or ideally offers) in the lower South Island when storage was above the 99th percentile would directly connect offers with normal market outcomes experienced in the past. This action to correct would therefore be more closely aligned with the legal tests in Part 5 of the Code.

Any SRMC based offer cap would <u>not</u> reflect normal market operations, result in a feasible outcome, or be consistent with the Authority's analysis to date

Several submissions seek an offer cap at the Authority's estimate of SRMC for South Island hydro generators. A cap on offers at SRMC has never been a part of the normal operation of the market even when spilling. These submitters also ignore the fact that offer quantities in higher price bands are legitimately used to manage resource consent requirements as well as hydrological, operational, and market constraints. A cap on offers at SRMC would mean no ability to offer in a way that respects resource consents and operational constraints and would result in the notional dispatch of far more South Island hydro generation than what the Authority has identified would be feasible.

As noted by Nova, an SRMC based offer cap would establish a strong incentive for generators to avoid spill and this could adversely affect storage management in the long term. The potential for hydro generators to alter their behaviour because of the UTS actions to correct should not be underestimated or disregarded because of the extraordinary confluence of factors. Hydro generators will be sensitive to and expect ongoing scrutiny of their offers whenever spill occurs in future.

Finally, we note that an action to correct based on SRMC or any other measure of generators' costs would be inconsistent with the Authority's analysis to date. As stated by the Authority in the UTS final decision paper:[6]

> We agree with Meridian that there is no requirement for generators to offer at SRMC. At no point have we suggested that offer prices should have been at SRMC, long run marginal cost (LRMC), or any other variation of cost. Our method is to estimate the excess spill and calculate the offer price needed to clear the generation that could have been produced with this excess spill (see section 7). We do not build this price from a set of costs that generators face.

As expected, some submitters claim 'conservative' modelling justifies an infeasibly low offer cap

The complainants,[7] Fonterra,[8] and Pulse[9] point to the supposed conservatism of the Authority's modelling to suggest that the Authority's methodology should be abandoned in favour of an offer cap at SRMC.

As Meridian noted in its submission, in many ways the Authority's estimate of "excess spill" is not conservative:

- The methodology used to estimate "excess spill" does not factor in competitive response – the analysis effectively assumes a static offer from all participants and that any adjustment of hydro offers to undercut others would not provoke subsequent offer changes, for example by North Island generators with take or pay gas contracts,

[6] Final decision paper, paragraph 4.18.
[7] Complainants, pages 4 and 9.
[8] Fonterra, page 1.
[9] Pulse, pages 1-2.

or those wanting to maintain their own generation to cover their retail contracts. Contact makes this same observation in its submission.[10]

- In many trading periods the Authority's modelling of "excess spill" allows unrealistically high generation output from Benmore station (above the highest offered generation of 532 MW). This appears to be because the Authority's model ignores transformer losses and local service usage. The unrealistically high volumes modelled from Benmore could not be sustained in the real world while maintaining frequency response at 50Hz. Again, Contact's submission makes a similar observation in respect of periods when Clyde was modelled to run at 464 MW.[11]

The Authority should not seriously contemplate an action to correct that is inconsistent with its prior analysis and that would deliver an outcome that is unsupported by evidence as to its feasibility in the real world. It would also not be reasonable for the Authority to gloss over this by simply saying its estimate of "excess spill" is conservative. If the Authority has a better way to estimate "excess spill" it should have used that method in its substantive decision and made the case for an offer cap to deliver that outcome.

Other submitters support a higher offer cap

Meridian agrees with the submission from Neil Walbran Consulting that the Authority should consider long term investment signals when determining the level of any offer cap:[12]

> "It is difficult to balance productive, allocative and dynamic efficiency in any decision, but because dynamic efficiency will have larger longer term benefits I suggest the EA consider the slightly higher offer cap option [$19.98 / MWh]. Particularly given the need for significant renewable generation investment in the medium term to meet our climate change objectives."

We also note the submission from Nova that:[13]

> "If the Authority resets the spill price too low, then as an unintended consequence, the hydro generators will likely assume that lower spill price for future modelling, and the hydro security of supply settings will likely be lower than desirable."

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[10] Contact, paragraph 5.
[11] Contact, paragraph 6.
[12] Neil Walbran Consulting, page 1.
[13] Nova, page 7.

…

"Nova's estimate is that the appropriate spill price is within the range of $13.70 [option (a)] at the lower end, and $29.59 [option (c)] at the higher end. Nova rejects option (e) i.e., SRMC, as unsustainable. If the gross profit on generation is reduced to close to zero during periods of spill, then hydro generators will be strongly incentivised to keep storage levels low to avoid all spill. This will result in a lower security of supply in the future and more volatile electricity prices"

The offer cap should apply to the stations identified by the Authority

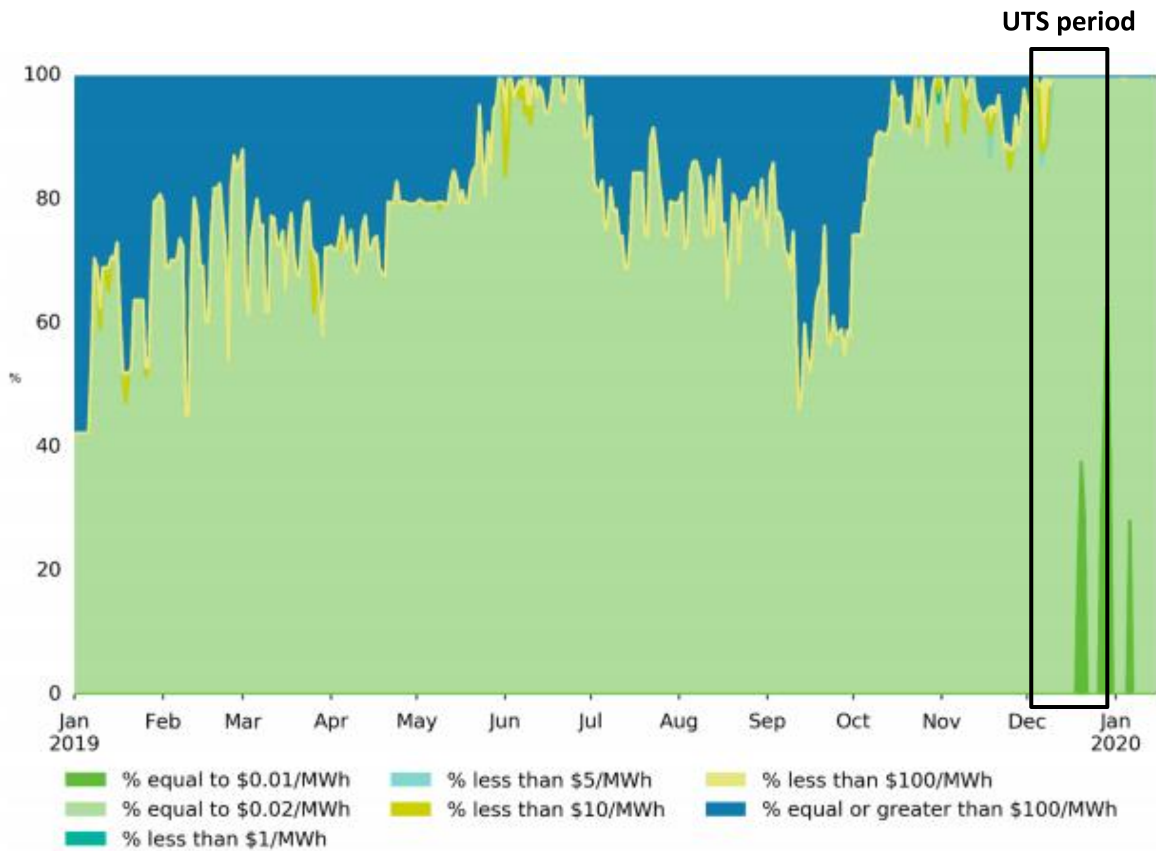
There is no justification for a cap on Manapōuri offers

The complainants suggest that the offer cap should include Manapōuri because there were limited occasions where Manapōuri offers were above the offer cap.[14]

A cap on Manapōuri offers would be inconsistent with the Authority's findings that Manapōuri offers "were generally consistent with maximising generation during a spill event" [15] and "offer prices at Manapōuri … were predominantly low during the UTS period, consistent with the abundance of hydro storage, and the Authority proposes to leave those original offers unchanged."[16]

In the preliminary decision paper the Authority looked closely at Manapōuri offers during December 2019 and found that all the generation offered was dispatched in almost all trading periods (one exception being on 7 December when Manapōuri was constrained down by the System Operator due to electrical storms). Furthermore, as shown in the Authority's chart below, all the generation offered during the UTS period (bar the exception noted above) was offered far below any of the proposed offer caps at $0.01 or $0.02 / MWh. The suggestion that Manapōuri offers during the UTS period did not reflect the normal operation of the market at the time and need to be corrected is therefore clearly wrong.

[14] Complainants, pages 2 and 6.
[15] Preliminary decision paper, paragraph 12.15.
[16] Actions to correct paper, page iii.



Finally, given the already very low offers at Manapōuri, applying a cap to Manapōuri offers would likely have little effect on the level of final prices or the level of offer cap that would dispatch the additional South Island hydro generation sought by the Authority.

Individual station level volumes in the model are not determinative

Contact's submission refers to the reduced generation and increased spill on the Clutha scheme under the Authority's vSPD run.[17] The same is true for Ōhau A and Manapōuri generation in the model run, both of which would see generation decrease and spill increase. Volumes at other Waitaki stations are also adjusted in the model run despite the Authority only considering the legal and physical feasibility of additional generation at Benmore station.

Displacement of hydro generation from different sources is inevitable in any modelled scenario with adjusted hydro offers. However, these individual station level outcomes are not particularly relevant to the Authority's methodology which is intended to estimate the amount of additional hydro generation that could feasibly be dispatched from the South Island as a whole and identify a price at which that might have occurred. Meridian agrees

[17] With a $13.70 / MWh offer cap for the Waitaki and Clutha schemes from 3 to 27 December 2019.

that the Authority's methodology achieves its intent, but the level of the offer cap must be consistent with the methodology used by the Authority to date.

Changing the mix of generation stations that are subject to the cap would be a departure from the Authority's methodology to date. If that was contemplated, Meridian would consider it necessary for the Authority to publish this alternative model run and offer participants the opportunity to comment on whether the alternative level of offer cap and the basis for it better reflect the normal operation of the market. This would be a significant change to make at the last minute without further consultation.

Some submitters misapply the UTS provisions

Seeking to punish or apportion blame is not the purpose of the UTS regime

The complainants and Fonterra misconstrue the UTS regime and seem to think the purpose of a UTS is to apportion blame for supposed wrongs or punish particular parties. That is not the purpose of the UTS regime.

The UTS scheme was enacted to provide a rule of last resort to swiftly fix those occasions when the wholesale market is not operating normally, despite compliance with the Code. This is evidenced by the UTS definition in the Code itself, which stipulates that Part 5 of the Code does not apply to any situation that can "satisfactorily be resolved by any other mechanism available under this Code".

The Code provides a carefully calibrated regulatory regime, comprising detailed and specific obligations that participants must comply with in a range of potential situations that could arise in the market. However, the electricity market is complex and dynamic and so, from time to time, undesirable situations could arise which are entirely unforeseen, and therefore incapable of being corrected by the rules in the Code. These situations, which the High Court has identified as "typically … 'one off' events of relatively short duration"[18] are what the UTS regime is designed to address.

The UTS regime is not designed as a substitute for enforcement action which seeks to punish, compensate for, and deter breaches of the Code by individual participants. The Code breach process considers the conduct of an individual market participant. That process is provided by the Electricity Industry Act 2010 and Electricity Industry (Enforcement) Regulations 2010, which state that the Rulings Panel, after following due process, determines when punitive action is appropriate. By contrast, the UTS regime is focused on the Authority stepping in to correct a situation that has arisen in the market.

The complainants attempt to conflate the correction of a UTS and penalties for parties whose conduct may have been part of the confluence of factors that led to the UTS.[19] Fonterra says that there were “transgressing parties”[20] and compares the UTS process to “penalties

[18] *Bay of Plenty Energy Limited v the Electricity Authority* HC Wellington CIV-2011-485-1371, 27 February 2012 at [218]
[19] Complainants, at page 5.
[20] Fonterra, at page 1.

for market manipulation".[21] The suggestion by the complainants that Meridian and Contact should arbitrarily not receive constrained on payments, or that Meridian and Contact should fund constrained on payments, similarly attempts to use the UTS regime to impose penalties on parties. All these suggestions are inappropriate and misconstrue the purpose of the UTS regime. Meridian agrees with the Authority that "actions to correct are not intended to penalise individual traders, though the actions to correct may have financial consequences for them".[22]

The suggestion by the complainants that penalties be imposed as part of the UTS actions to correct not only misconstrues the UTS provisions, it directly contradicts the fact that no party has been found to have breached the Code. While the Code breach process is entirely separate from the UTS it is worth noting that the investigation into whether Contact or Meridian breached the high standard of trading conduct provisions in the Code has now concluded. The Authority decided not to refer either matter to the Rulings Panel as it did not consider either Contact or Meridian to have breached the Code.[23] So even assuming for a moment that the Authority could impose a penalty as part of a UTS process, it would not be clear what wrong the penalty would be attempting to address – parties behaved in accordance with the Code.

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[21] Fonterra, page 1.
[22] Actions to correct paper, page iv.
[23] https://www.ea.govt.nz/code-and-compliance/compliance/decisions/investigations-closed-no-settlement-reached/

Full wholesale market resettlement should be the goal

Under the normal operation of the market, everything settles based on final prices

Meridian's submission noted that any action to correct that results in some parts of the wholesale market resettling but not others (for example resettlement of the spot market but not derivatives) will not represent the normal operation of the market. Indeed, such a situation would be unprecedented and would *never* occur in the normal operation of the market.

Meridian's submission was that to the extent possible, the Authority should ensure that the revised final prices also flow into the settlement of derivatives. Meridian agreed with the Authority's view that "hedge markets should be allowed to fully carry out their role of managing risk."[24]

Other submissions indicated similar broad support for a principled approach to resettlement of all parts of the wholesale market. For example:[25]

> "Pioneer believes the approach to actions to correct the UTS should be principles based. The Authority's proposal to exclude derivatives is not consistent with a principles-based approach."
>
> …
>
> "Pioneer submits it is not 'arguable' that a return to normal or workably competitive wholesale market requires derivatives to incorporate the proposed correction to spot prices – it is imperative that derivatives incorporate the correction to the spot market."
>
> …
>
> "It is not appropriate for a participant to incur lower revenue on spot sales due to the reset but benefit from settlement of derivatives at [the higher prices of the UTS period]."

Mercury similarly stated in respect of derivatives traded on the ASX that:[26]

> "With prices settling at incorrect values sellers will have less confidence in providing volume to this sales channel and may be less likely to maintain or increase liquidity in

[24] Proposed actions to correct, page iv.
[25] Pioneer, pages 1-2.
[26] Mercury, page 1.

future if their positions are not corrected. Restoring confidence to the entire market, which is the EA's primary goal, must include derivatives and we encourage the EA and the ASX to revisit the decision to not re-settle UTS impacted contracts."

Likewise:[27]

> "Genesis believes that the ASX futures should be resettled against the reset prices. Not doing so appears to create a split market and potentially material distortion, which would create 'winners and losers' without justification. It is not clear that the time that has elapsed between the situation and the correction is sufficient justification for not keeping the markets in balance."

Trustpower also noted concerns about "the implications of decoupling final spot and hedge market outcomes as it will potentially have implications for the overall integrity of the hedge market."[28] Trustpower encouraged the Authority to address this issue and suggested a longer-term solution might be to introduce default contract terms which require resettling should prices be reset in designated circumstances.

The Authority should work with the ASX to deliver full resettlement

As stated in Meridian's submission we consider it would provide increase clarity and confidence to the market if the Authority directed the resettlement of derivative contracts between participants.

For derivative contracts traded on the ASX, the counterparty to every transaction is the exchange. While it may be difficult for the Authority to direct resettlement, Meridian strongly encourages the Authority and ASX to work together to achieve a resettlement that will reflect the normal operation of the market and prevent the decoupling of final spot and hedge market outcomes.

The ASX has said very little about the reasons for its reluctance to resettle with a one page submission simply indicating that "having regard to our regulatory obligations and the amount of time that has elapsed, our current assessment is that we would not change the settlement price of associated ASX derivatives."[29] While the ASX is correct that spot prices are used in a complex ecosystem of financial contracts that participants use to manage price risk, Meridian disagrees with the ASX that it is the resettlement of spot that would create a

[27] Genesis, page 1.
[28] Trustpower, page 1.
[29] ASX, page 1.

new risk of divergent spot and derivative prices – it is the failure of the ASX to resettle that would create this new risk.

The ASX stands alone as the only submitter to favour an off-market wash up to correct the UTS. In taking this stance, the ASX appears to simply be trying to avoid the administrative effort of resettlement created by the proposed UTS action to correct and the necessary implication for derivatives. Despite being based offshore, the ASX is an integral part of the New Zealand electricity market and should therefore listen to its customers (electricity market participants) and work together with the Authority to achieve the best possible resettlement of the entire New Zealand electricity market.

Meridian is not aware of any legal barrier to the ASX undertaking a resettlement. The ASX operating rules state that final settlement prices are subject to Rule 3100, which provides a broad discretionary power to the ASX to take any action it considers necessary to ensure the market for any of its products is "fair, orderly, and transparent". Actions can include:

- "cancelling or amending any Transaction"; and
- "directing that products be offered or settled at a price other than that provided for by the Rules, in such a manner and on such conditions as it determines".

Meridian considers full resettlement of all derivatives (including ASX contracts) would be the most principled approach and would best restore the normal operation of the market. If only a partial resettlement is achievable, then the Authority may need to consider whether no adjustment more closely reflects the normal operation of the market.

The timeframes to consider the UTS have created the risk of decoupled spot and hedge prices

The market is facing new risks because of the potential decoupling of spot and hedge prices. The market is in this position, at least in part, because of the length of time the Authority has deliberated on this matter. Meridian accepts that the allegations made by the complaints in this matter were enormously broad, impacting literally thousands of trading periods and that the task given to the Authority of assessing those allegations was huge. However, the market would not be in this position if the Authority had delayed the publication of final prices pending a UTS decision and been able to swiftly make that decision. Meridian considers that a more urgent process is what was intended by the provisions of the Code and notes that the 2011 UTS was addressed in around three months. While process considerations are outside the scope of the current consultation, Meridian encourages the Authority to

review the way it conducted this UTS investigation and consider what process improvement it might make to streamline future UTS investigations and avoid industry uncertainty.