27 April 2021

Submissions
Electricity Authority
Wellington

By email: uts@ea.govt.nz

Consultation: Proposed Actions to Correct Undesirable Trading Situation 2019

1. The Undesirable Trading Situation (**UTS**) claim covered a period when significant flooding occurred in the lower South Island. Contact manages New Zealand's largest run of river system, a highly volatile catchment with limited ability to store water. Safety of our dams, people, plant and local communities is Contact's paramount concern. During such times, Contact must balance safe and sensible generation in real-time with the safety of our plant, people, downstream communities we operate in, our consents, and managing the health of the river.

2. Contact supports the Authority's detailed analysis in the UTS which identified that Contact was unable to maximise generation, spilling water was necessary to manage flood conditions, and that Contact's Quantity Weighted Offer Prices (QWOP) reduced over time, consistent with the Authority's expectations. The Authority recognised the paramountcy of safety of people and communities in its decision. At all times, but particularly in flood circumstances, this extends to limiting stress on key safety equipment in plant, such as automated spill gates.

3. We have reviewed the Authority's proposed actions to correct the 2019 UTS and the detailed modelling. We have the following comments:

Modelling and assumptions

4. While Contact has been able to replicate the outcomes from the Authority's modelling using the same input assumptions, we are concerned that this theoretical modelling does not adequately reflect the practical constraints and imperfect information in real-time wholesale market operation – particularly for the relevant UTS period where Contact, for example, was managing operations during flooding.

5. This ex-post theoretical modelling assumes perfect information, ignores constraints and ignores the dynamic nature of the market by changing some offers and assuming others remain unchanged regardless of price changes. As a result, the theoretical model determines an outcome that would be practically unachievable in real-time, and as a result,

risks unfairly setting a precedent that penalises market participants for failing to meet an unachievable and theoretical market standard.

6. In the model, Clyde was modelled to run at 464MW frequently. When Clyde does run at 464MW, this leaves no MW headroom for any *FIR* and *SIR Reserve* or *Frequency Keeping*. Similarly, it limits the *Voltage Control* that the station can provide to Transpower. All these items are important to ensure the safe operation of the New Zealand Electricity system. The proposed approach to make a blanket change to offers will not account for the additional operational decisions that are being made in the real time market.

7. During the UTS period in December 2019, dispatch traders were trying to minimise the number of spill gate operations and the spill volume. The proposed generation in the Authority's model is lower at 361,671 MWh compared to actual generation of 363,175 MWh. The reduction in generation of -0.41% on the Clutha supports that Contact was not spilling excess water as alleged. The modelling results in increased spill across the Roxburgh and Clyde power stations and highlights the dynamic and complex challenge of attempting to apply a counterfactual that leads to 'better' outcomes.

Thermal Plant

8. The proposed methodology applies a constrained-on payment to a generator when the resulting spot price is below its dispatched offer price. This approach does not consider the operational limitations on thermal plant where volume is frequently offered at $0.01/MWh to allow dispatch above minimum operating levels. Contact relies on forecast pricing when committing units such as TCC as some volume is always offered well below the marginal cost. Given the revised spot prices, it is unlikely that Contact would have generated with thermal over the UTS period. The proposed constrained payment mechanism does not suitably allow for cost recovery.

Resetting of hydro generating stations prices

9. In the UTS, the Authority identified the confluence of events during the flood period that included spilling by Meridian to manage the HVDC constraint, and Contact managing plant safety and the operation of its automated flood gates.

10. The Authority's preliminary view is that spot prices should be reset at Meridian's hydro generation (except for Manapōuri based on low offer prices), Genesis hydro generation is excluded (on the basis it was a price taker) and that Contact's hydro generation should be reset.

11. Contact questions whether its hydro generation at Clyde and Roxburgh spot prices should be reset. As explained during the UTS, Contact offer prices reflected the need to minimise marginal operation, safe operation of its spill gates and managing consent requirements. We do not agree with the draft conclusion that "[t]hese offers were also inconsistent with the abundance of water available for generation and contributed to the reduction in competitive pressure in the South Island".[1]

[1] Electricity Authority, *Proposed Actions to Correct UTS 2019,* para.5.19, p. 8.

12. Resetting generation offers as proposed would also raise safety and security of supply issues. If Contact had offered its Clutha generation during the period as suggested by the EA, while others remained the same, there is a heightened risk the plant would not have operated in a way that ensure the safety of plant and people.

13. These examples highlight the challenge and inherent limitations of the modelling. Attempting to resolve the market ex-post to deliver a better outcome will not capture all the other trade-offs that are being made in real-time. For this reason, the Authority must take a prudent and cautious approach in modelling its proposed actions to correct the 2019 UTS.

14. Our response to the specific consultation questions is attached.

Yours sincerely

Jacqui Nelson
Chief Generation Officer

Question	Contact Response
Q1. What, if any, actions should the Authority undertake to address excess spill, system security, and any other consequent effects? How would such actions address the objectives of Part 5 of the Code?	In finding that a confluence of events led to a UTS in December 2019, Contact agrees that the Authority's proposed approach to direct that trades be settled at a specified price is consistent with section 5.2(2)(c) of the Code could correct the UTS. In finding a UTS, the EA concluded that prices were abnormally high and excess water was spilt. Resetting prices to lower levels would correct the perceived high prices. However, the modelling done to reset prices does not appear to adequately reflect the dynamic nature of the market. Given the time that has elapsed since the UTS event occurred, the proposed approach to only reset the spot market payments that would have prevailed if the UTS had not occurred, is appropriate. We also agree with the Authority's preliminary view that changes to South Island instantaneous reserve offers is not required, and that any correction to hedge markets should be determined by the voluntary agreements of contracting parties. Resetting prices will not reduce spilt water, and as the EA modelling shows, more water would have been spilt from the Clutha than what actually occurred. Contact is concerned that the Authority does not appear to distinguish between 'excess' spill (which suggests a conscious decision to spill water rather than generate) and 'unavoidable' spill that was necessary to manage the safety of dams, people, plant and local communities, meet consent requirements, manage automated spill gates and ensure prudent operation during the flood conditions. As Contact submitted during the UTS investigation, Contact did not spill 'excess' water, but rather undertook necessary and unavoidable spill to ensure the safe operation of its plant, support security of supply and meet its obligations under the Code. The Authority's own modelling shows that the generation from Clyde and Roxburgh would be lower than actual generation if offer prices were reset. As a largely run-of-river scheme, this would lead to increased spill.
Q2. Do you agree that the Authority should seek to correct the UTS period by resetting the payments made/received by spot	Yes. The EA has limited ability to reset these prices but not hedge contracts (bilateral and futures), fuel supply contracts or carbon supply contracts. There may be unequitable outcomes as a result.

market purchasers and generators? (If not, please explain your reasoning.)	
Q3. Do you agree that the Authority should attempt to correct the settlement during the UTS period by resetting prices in the electricity market?	Contact agrees that resetting prices in the electricity market for the UTS period is appropriate. However, in determining what the spot prices might have been in the absence of a UTS, the Authority must recognise that the reset price will not be a perfect proxy of a market spot price in a dynamic market. Ex-poste, it assumes that generators had perfect information and perfect foresight while operating plant in real-time during flood conditions. Furthermore, the static price cannot reflect the reality that spot prices and offers would have adjusted over time to reflect competitive dynamics. As a result, the Authority must recognise the risk that outcomes modelled cannot replicate what might have occurred in a dynamic wholesale market in the absence of this UTS.
Q4. Do you agree that injection and off-take volumes should remain unchanged in any resettlement?	Contact agrees that volumes should remain unchanged. The Authority notes that "resetting volumes would likely result in the spilling South Island hydro generators receiving payments for energy they did not inject into the network and other generators would not be compensated for the electricity that they injected" We also agree that operators who generated during the period, but would not have done so if spot prices were reset, should not be penalised for generation during the UTS period.
Q5. Do you agree that the Authority should attempt to correct the UTS by revising final prices in the electricity market, rather than by an 'off-market' wash-up of spot electricity payments to and from the clearing manager?	Contact agrees that the Authority should revise final prices, rather than an off-market wash up of payments.
Q6. If offer prices or offer volumes are reset, which hydro generating stations should have offers reset? (Please answer yes/no, with any additional supporting commentary.) a. Aviemore?	In its UTS decision, the Authority identified the confluence of events during the flood period including spilling by Meridian to manage the HVDC constraint, and Contact managing plant safety and the operation of its automated flood gates. The Authority's preliminary view is that spot prices should be reset at Meridian's hydro generation (except for

b. Benmore? c. Clyde? d. Manapōuri e. Ōhau f. Roxburgh g. Takapo A, B? h. Waitaki? i. Other stations?	Manapōuri because of low offer prices), Genesis hydro generation is excluded (on the basis that it was a price taker) and Contact's hydro generation should be reset. Contact questions whether its hydro generation at Clyde and Roxburgh spot prices should be reset. As explained during the UTS, Contact offer prices reflected the need to minimise marginal operation, safe operation of its spill gates and managing consent requirements. We do not agree with the draft conclusion that "[t]hese offers were also inconsistent with the abundance of water available for generation and contributed to the reduction in competitive pressure in the South Island".[2] Resetting offers as proposed would have raised safety and security of supply issues and would not reflect the operational reality in seeking to correct the UTS found. Safe operation of hydro generation must have primacy, and we do not agree that such operation would result in reduced confidence in the market.
Q7. If the prices and volumes are reset, do you agree that North Island offer prices and offer volumes should remain the same as originally submitted? (If not, please identify any alternative actions.)	Contact agrees that offer volumes and prices for North Island generation should remain unchanged. It should be noted that North Island offer bands may not be reflective of the underlying fuel cost, especially where must-run thermal generation is offered at $0.01/MWh, and this should be taken into consideration in the constrained on-payment.
Q8. Do you agree that resetting offer prices and volumes by imposing a cap is the preferred action to correct the UTS? If not, please identify preferred alternatives.	Contact agrees that the appropriate approach is option (i) – to correct offer prices at the relevant hydro generating stations by placing a single cap on the maximum offer price that can be charged. While we have concerns about a proposed offer price (which assumes perfect information, 100% foresight and ignores reality that competitive response would occur over time), we agree that the approach is administratively simple.
Q9. If revisions to offer prices are to vary through time or across generating stations, how should the offer prices be determined?	The Authority's analysis assumes the spot price cap is static over time. This ignores the dynamics that would occur in the wholesale market as generators respond to competitive offers. Contact does not consider it is possible to evaluate how such offer prices might have varied over time – particularly given the time elapsed since the UTS found in December 2019.

[2] Electricity Authority, *Proposed Actions to Correct UTS 2019,* para.5.19, p. 8.

Q10. Do you consider that final prices should be reset directly? If so, how should they be calibrated?	Contact does not support resetting the final prices directly. We agree with the Authority's approach of using vSPD to determine the impact on final prices. Contact has reviewed and replicated the Authority's modelling in vSPD and agree with its approach.
Q11. Do you agree that the aggregate offer volumes of each generating station should equal the aggregate amount offered by that station during the UTS period? Please describe any preferred alternatives.	Contact agrees that the revised offer volumes for each generator should aggregate to the level that the generator originally offered during the UTS period. We agree with the Authority that "[g]enerators generally do not withhold capacity by curtailing the aggregate volume of their offers because the 'safe harbours' clause of the Code, clause 13.5B(1)(a) incentivises generators to offer all their available generating capacity. To withhold electricity for profitability reasons, over and above capacity issues just noted, generators match offer volumes with offer prices that they do not expect to clear."[3] As explained above, Contact's offer structure reflected the safe operation during flood conditions to avoid marginal operation for safety reason. The proposed cap on offer prices at Clyde and Roxburgh stations is therefore inconsistent with the purpose of the UTS proposed action to correct.
Q12. Which of these mechanisms in paragraph (a) – (e), if any, should be used to calibrate 'corrected' electricity offer prices? (Please identify any other preferred alternatives.)	As noted in previous submissions, the lack of competitive response assumed in the EA's proposed methodology is a key limitation, however of the options presented it has the most empirical support.
Q13. Do you agree that generators, other than those with 'reset offers', that were dispatched to generate electricity at offer prices above the reset final prices should be treated as constrained on? (If not, please identify preferred alternatives.)	We agree. We also believe the EA need to consider generation that is offered at pricing below marginal costs for operational reasons such as minimum operating volumes. For example, both TCC and Stratford peakers will often have volume offered at $0.01/MWh to ensure the plant is dispatched at a safe and efficient level. These decisions are made based on forecast price expectations.

[3] Para 5.39, p. 12.

Q14. Do you agree with the Authority's proposal not to revise constrained off payments, associated with frequency keeping? (If not, please explain and identify any preferred alternatives.)	
Q15. Should offers to the instantaneous reserves market during the UTS period be corrected? If so, how should instantaneous reserve offers be corrected?	Contact agrees with the Authority's conclusion that reserve offers need not be corrected, as they were not raised as an issue in the UTS.
Q16. Do you agree with the proposed approach to treatment of derivatives for the purposes of correcting the UTS? Please explain your answer.	Contact supports the Authority's draft conclusion that "the actions to correct on the expectations that underpin trading through time, would be impossible to unravel"[4], and that derivatives markets should be left to adjust according to their terms and conditions.
Q17. Are there any additional, feasible and lawful actions that the Authority should or could undertaken in relation to derivatives markets?	As the Authority identifies, there are no feasible or practical actions in respect of derivatives markets. Any proposed changes would be necessarily arbitrary and would be likely to reduce confidence in the market and be inconsistent with the purpose of UTS provisions within the Code.
Q18. How should the Authority use its powers under Part 5 in relation to LCE payments?	
Q19. Should the Authority use its powers under Part 5 of the Code to direct retailers to reimburse consumers that had contracts on variable price terms? What, if any, action should the Authority take in relation to variable price contracts?	Contact expects that reimbursement will occur consistent with consumer contracts for those with variable price terms. It is unnecessary for the Authority to expressly direct retailers to reimburse consumers.

[4] Para. 5.65, p.19.,

Q20. How should any resettlement arising from the actions to correct the UTS be implemented?	We agree that implementing the resettlement process may take several months for the pricing and clearing manages to implement and audit, and that traders hare provided with sufficient time to allow for any liquidity implications of payments that may be required.
Q21. If there is a resettlement, what window of time after invoicing should be allowed for traders to meet their obligations?	Impact parties should be provided an extended settlement period of two months.
Q22. Please provide feedback on the operational implementation of the proposed actions to correct the UTS, including the interest rate that should be used to scale payments.	