

6 March 2023

Market Development Advisory Group
Email: mdag@ea.govt.nz

Price Discovery in a Renewables Based Electricity System

NZX Limited (**NZX**) is pleased to submit this response to the Market Development Advisory Group (**MDAG**) consultation on '*Price Discovery in a Renewables Based Electricity System*', dated 6 December 2022.

NZX thanks MDAG for the opportunity to make this submission. We commend MDAG for the wide-ranging scope it took in evaluating the broad suite of options available to prepare the wholesale electricity market for a renewables-based system. NZX broadly agrees with the preferred options presented by MDAG and notes additional comments below in response to MDAG's consultation questions. Nothing in this submission is confidential.

About NZX

NZX is a licenced and regulated exchange that operates the public equity, debt and derivatives markets.

As an electricity industry participant NZX provides services to support the efficient buying and selling of electricity to other wholesale market participants. Under contract to the Electricity Authority, our regulated market operator infrastructure provides a range of specialist trading, clearing, billing, pricing, reconciliation, and data platforms.

Introductory Comments

NZX concurs that it is appropriate for MDAG to ask whether there is still a need for a market under a high penetration renewables-based scenario. We agree with the view expressed by MDAG that market arrangements are the best mechanism to enable competition and deliver supply at least cost for the consumer. We note that competitive markets provide the most efficient results for the economy and reward innovation in products and services to meet market demand. We also agree that the rulebook creates the platform for the effective coordination of the market arrangements, but also note the need to ensure sufficient flexibility and ease of modification in embedded within the rules to rapidly accommodate changes in technologies and participant approaches to operating within the market.

NZX also supports the continuation of marginal based pricing for the wholesale market. This well established and economically sound pricing approach produces a 'merit order' cost curve and transparently signals the cost of supply to the purchaser. We consider a shift to 'pay-as-bid' pricing will dilute the wholesale price signals and result in an overall net cost to consumers.

The proposed scope of initiatives presented by MDAG are wide reaching across the electricity sector. We note that some initiatives are already underway or planned, however many are proposed to commence with the next 1-3 years. We consider this acceleration is necessary given the decarbonisation already occurring in the sector and the need to modify the market regulatory settings to adequately accommodate these changes. To maintain momentum, NZX therefore agrees that more onus could be placed on stakeholders to co-design the solutions within a framework established and monitored by the Electricity Authority.

Consultation Questions

Question 2: What is your view of the proposed sequencing and timing of measures to strengthen operational coordination?

Overall, NZX believes the sequencing and timing of measures is broadly appropriate.

We think however that investigation and potential development of an ahead market ought to be prioritised higher given that it creates price certainty prior to real time dispatch and could address the increased availability/reliability risk that will come to the fore under a market with increased renewable supply. NZX notes though that improved transparency in the contracts markets may also help address some of those issues.

In addition, while we acknowledge that negative offers/prices are more complex than the status quo, and that there is a must run dispatch auction already in place, we agree that this initiative should be kept under periodic review and reconsidered if circumstances change.

Question 4: Do you agree that, weighing costs and benefits, our preferred options in Table 10 above are likely to best address the risk management and investment issues described in that chapter? If not, why not?

Yes, we agree that the preferred options will likely best address the key issues. NZX also agrees that capacity mechanisms and strategic reserve arrangements are not warranted in the New Zealand context.

Question 5: What is your view of the proposed sequencing and timing of measures to improve risk management and investment?

Subject to our comments in Question 6, the proposed sequencing appears appropriate.

Question 6: What, if any, other options should be considered to improve risk management and investment?

NZX believes that MDAG should also be giving consideration to enhancing the clearing arrangements in the wholesale market. These arrangements remain key to enabling increased participation in the market and the new structure arising under a renewables-based scenario with different supply and demand participation models.

Other than some modifications made in 2013, the current clearing design is still largely based on a structure developed in the mid-1990s. As the market has evolved, and participant risk management practices have matured, NZX contends that improvements can be made to significantly enhance this side of the wholesale market. A key issue we observe is that considerable participant capital is currently tied up in the clearing house to meet settlement. This capital-intensive approach is both sub-optimal from a financial and risk perspective, and also acts as barrier to new entrants and their ability to scale growth.

Other related options to potentially reduce market exposure and improve collateral arrangements include shortening the settlement cycle, settling on 5-minute prices, introducing margining models and incorporating value-at-risk-risk modelling methodologies into the clearing house, and strengthening the clearing house arrangements to meet internationally recognised central counterparty standards. We also consider there is merit for MDAG to assess whether net sellers of electricity should continue to take on the residual default risk of the market, especially considering new renewable based supply is increasingly being provided from a wider pool of generators.

Question 7: Do you agree that, weighing costs and benefits, our preferred options in Table 13 above are likely to best address the demand side flexibility issues described in that chapter? If not, why not?

Yes, NZX agrees the proposed initiatives will likely address demand flexibility issues. NZX sees particular benefit in the phase out of profiling where smart metering is in place. While we recognise there is cost for retailers to switch away from profiling, we consider the benefits of using a higher proportion of actual meter data to both reconcile and settle wholesale market transactions will likely result in an overall net benefit to the consumer.

Thank you again for the opportunity to submit on this consultation. As an independent operator of the electricity market NZX is uniquely placed to assist MDAG on assessing the options presented in its paper and welcomes further engagement.

Please do not hesitate to contact us on any matter contained in this submission.

Yours sincerely



Shane Dinnan
Head of Energy and Carbon