

20 July 2007

Jenny Walton  
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Dear Jenny

**SUBMISSION ON THE ISSUES PAPER – SURVEY OF MARKET PERFORMANCE  
MARKET DESIGN REVIEW**

**Introduction**

1. This submission is made by Rio Tinto Aluminium New Zealand Limited (*RTANZ*), on behalf of Rio Tinto Power (N.Z.) Limited and New Zealand Aluminium Smelters Limited (*NZAS*). It is made in response to the Commission's request for submissions on the Issues Paper – Survey of Market Performance, Market Design Review (*the Review*). Nothing in this submission is confidential.
2. RTANZ has in the past supported, and continues to support, the electricity market where competition provides benefits that flow to consumers. We support appropriate regulation in areas where competition does not exist or is limited. RTANZ has contributed to the ongoing development of the market through involvement in the Commission's Advisory Groups and through submissions. We are also a member of the Major Electricity Users Group (MEUG) an organisation that also actively contributes to the development of the market. RTANZ is pleased to provide this submission in order to provide informed discussion on the further development of the market.

**Background**

3. In 1995 the Government considered that the electricity market would deliver:
  - *Vigorous competition from private sector generation and demand-side management to meet new electricity demand;*
  - *A diversity of prices and other conditions for selling electricity on contract; and*
  - *Competitive disciplines on prices for electricity in the spot market.*

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4. The benefits that were to flow from the above objectives were the basis on which the electricity market establishment was sold to consumers. It is interesting to consider if the information provided in the Issues Paper is sufficient to assess the performance of the market against the original and subsequent published objectives for the market. Such an assessment would be useful to include in the Review.
5. At the time the Commission was established in 2003 the Government published its Government Policy Statement on Electricity Governance (GPS). Since that time the GPS has undergone several revisions. The GPS sets out the Government's general objectives for the performance of the electricity market and also defines some specific actions to be taken by the Commission.
6. Since the introduction of the market in 1996 several reviews have been undertaken. In 2000 the Ministerial Review into the Electricity Industry included a comprehensive formal review of the market structure. In August 2005 NZIER completed an economic review of the market for the Commission<sup>1</sup>.
7. Whilst it is valuable to develop an informed view on the performance of the market and identify where it is failing to deliver benefits to consumers, it is important that full value is obtained from such reviews and that they are not left to inhabit bottom drawers or archives.
8. The current Review being undertaken by the Commission will be valuable if it provides an accurate understanding of the issues and market performance. In addition, RTANZ considers that a useful output from this project would be a set of measurements against which the market can be reviewed on an ongoing basis (e.g. a market performance dashboard).

### **Approach taken and report structure**

9. RTANZ notes the overall structure of the review is intended to address shortfalls in market performance and provide a process through which solutions can be developed and implemented. The Issues Paper is the first step in this process. The intended approach appears to be logical and allows input from stakeholders at key stages.
10. RTANZ notes that the scope of the Review is limited to the retail and wholesale market segments and is focused on market design issues. Whilst it is reasonable to limit the scope of the review to areas that fall under the Commission's mandate, the design of the market, and therefore the Review, must take into account wider factors. For example:
  - Since 1996 the structure of the electricity market has changed significantly. Separation of line and energy components has led to the vertical integration of generation and retail.

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<sup>1</sup> [http://www.nzier.org.nz/SITE\\_Default/SITE\\_Publications/x-files/18155.pdf](http://www.nzier.org.nz/SITE_Default/SITE_Publications/x-files/18155.pdf)

- The introduction of transmission regulation changed the 'market driven' investment decision concept that nodal pricing was intended to facilitate.
  - The introduction of the Electricity Governance Rules (Rules) removed the net pool facility and replaced this with a mandatory gross pool.
11. The intended structure of the Review (Figure 1 Chapter 1-2) provides a straight forward and pragmatic approach. The timetable is ambitious and may already be slipping. However, it is important that at the issues stage stakeholders are fully engaged and are able to contribute to the definition of issues.
  12. Whilst the Issues Paper provides a very useful compilation of existing market information it does not actually set out the issues. The Commission provides observations on the information provided rather than defining current market performance issues. This is understandable, however time must now be taken to carefully establish the specific issues as it would be unfortunate if key issues were omitted and not fully considered in the overall Review.
  13. From the information provided in the Issues paper it is not clear when and how the issues will be finalised and if these will be subject to a round of consultation or stakeholder review. RTANZ believes that the identification and definition of issues is the key stage in the Review and that the current Issues Paper does not identify nor define them. Also, given the broad and general information in the Issues Paper and the general questions asked by the Commission it is unlikely that all the issues will be flushed out from the consultation on the Issues Paper.

## **Market Information**

14. RTANZ agrees with the Commission's observations that accurate and timely information is essential for a well functioning market. Since the establishment of the Commission, the information available has increased significantly<sup>2</sup>. Even so, there remains an asymmetry between suppliers and consumers in relation to the access to, and understanding of, market information.
15. A detailed examination of information quality/accessibility issues should be treated as a high priority in the next stage of the Market Design Review as it is essential to a well functioning market. This needs to include an analysis of what information could and should be provided free to the market.
16. An important additional consideration for the Review is to what extent the Commission can provide expert explanation and analysis that adds value to the information provided.

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<sup>2</sup> The availability of the Centralised Dataset has made a significant contribution to the quality of analysis that can be undertaken on various aspects of the market.

## **Reliability of supply**

17. RTANZ has contractual arrangements in place that establish reliability and quality standards for supply at Tiwai Point. The maintenance of these standards is important to the continuing high quality performance of the aluminium smelting process at Tiwai Point.
18. It is interesting that the Review focuses on the market performance of reliability from an historical and geographical perspective. As demonstrated by RTANZ's arrangements, it is the actual performance required by the consumer, now and in the future, that is important.
19. A key issue for the market is that service is defined in a fragmented set of contracts and rules. It is impossible for consumers to gain a clear definition of the service they obtain from suppliers in terms of reliability.
20. A further issue is that consumers' expectations of supply reliability and quality are changing. The market has no facility to incorporate and respond to these types of consumer dynamics until performance falls below expectations and a crisis ensues.

## **Retail and wholesale entry and exit**

21. Figure 34 (chapter 2-34) and figure 80 (Chapter 3-60) provide interesting perspectives on the lack of significant new players in both market areas. Whilst this may well be a natural state given the size of the New Zealand market, the lack of new entrants should be seen as a key issue for further consideration.
22. Well functioning markets tend to have winners and losers and this effect should be seen in the electricity market if it is well functioning. The Review could be extended to consider the profitability of generator-retailers including their rate of returns, asset valuations and share prices (where applicable).
23. Well functioning markets also typically have vigorous competition with this quite often illustrated by significant marketing campaigns. Such campaigns are largely absent from the electricity retail market and this should be a concern. This is in marked contrast to the marketing campaigns undertaken by the generator-retailers after the further split of ECNZ as they competed to build market share. Having obtained a satisfactory market share and a natural hedge for their generation portfolios, there appears to be little desire for the existing players to compete.
24. The absence of new entrant retailers may be due to the risks of nodal price variations. In the GPS the government laid out its expectations regarding the development of financial transmission rights and stated that "long term risk management mechanisms would be available to end users and competing retailers". Despite the work undertaken in this area the GPS expectation remains to be satisfied.
25. It is also possible that new entrants (particularly retailers) find it difficult to meet the prudential requirements of the market. Prudential security requirements are

dynamic and increase with price increases, so retailers must have facilities that have this flexibility. RTANZ's understanding is that retailers are required to provide security for all purchases through the clearing manager. Under the Rules, hedge contracts can be used as prudential security but our understanding is that normally hedges are written in a way that prohibits this.

26. It is generally the case that efficiency is enhanced if risks are allocated to those that can manage them best. Clearly, prudential risk in the electricity market is more efficiently handled by those with assets and those that see the least risk. The inability to post hedges as security may be inhibiting the entrance of retailers that are independent of the major generators.
27. The Hedge Market Development Steering Group (HMDSG) has considered standard hedge contract arrangements. RTANZ understands that these standard hedge contracts are not suitable to be offered to the Clearing Manager as security. RTANZ considers that this should be reviewed and consideration be given to including a provision in the standard hedge contract that allows them to be used as security by retailers.

### **Wholesale market**

28. The information provided in the Issues Paper on capacity margins is important. RTANZ considers that the analysis demonstrates the potential for over investment in capacity under a centrally controlled system. Figure 42 (Chapter 3-3) could be interpreted as showing that the market has clearly delivered greater efficiency, assuming that the current energy margins are considered to be appropriate.
29. An important issue to consider is: what are the most appropriate energy margins (average and dry years) given the mix of fuel sources?
30. A relatively unusual feature of the New Zealand electricity market has been the lower level of intra-day/week price variations, when compared with other electricity markets. Overseas thermal-based systems tend to have day/night price variations to keep thermal power stations loaded during off peak times. Hydro-based systems can be more responsive to changes in demand and New Zealand's price variations have tended to be seasonally driven by hydrological conditions. However, the changing ratio of thermal to hydro generation combined with the low energy security margins may mean that things are changing and we may get more daily or weekly price variations.
31. The impact of changes in the capacity margin and fuel mixes should be studied and understood. If prices begin to reflect intra-day capacity and fuel variations it is possible that the time has come to consider the establishment of a day-ahead market. If this is the case, the design of such a market should be completed before it becomes urgent.
32. During dry years RTANZ has provided load reductions to assist in the management of tightening hydro conditions. These actions are to some extent made in response to market price signals. Since the commissioning of Whirinaki and the Commission's management of the 'minzone' we have observed a shift

in the way prices appear to respond to low hydrology situations. In late 2005 and early 2006 wholesale prices increased apparently in response to the perceived increased hydrology risk. Whilst the prices were high, they were not as high as in the 2001 and 2003 'dry' periods but the prices existed for a relatively prolonged period. These variations in price paths are clearly demonstrated in Figure 86 (Chapter 3-67).

33. If the above observations are correct, there is evidence that the Government intervention at Whirinaki, and the Commission's dry year security management, is having an impact on market prices and investment. The presence of Whirinaki, and its mechanistic position in the supply stack, has reduced the incentive for the market to invest itself in fast-starting gas-fired plant. This raises significant issues for the integrity of the market and participant confidence. The process for any future interventions should be clearly understood and the impacts fully evaluated under the provisions of the Rules. One area for improvement is around the process for procuring quick-response dry-year reserve, such as that provided for demand reductions.
34. The advent of the Rules caused a significant change in the structure of the market. Prior to the Rules the NZEM provided the wholesale pool arrangement and the MARIA provided a facility for generators and purchasers to net off their contracted quantities. The original structure provided a lower cost alternative to the NZEM for some participants. Importantly, this appears to have been the preferred option for most small independent generators and purchasers.
35. It is interesting that the MARIA net pool had the potential to provide a pathway to the British BETTA type market where generators and purchasers are dispatched against contracted quantities and a balancing arrangement manages real time differences between actual and contracted quantities. The British saw the NETA and subsequent BETTA arrangements as providing a more efficient and less complex market structure than the original gross wholesale pool.
36. Through the introduction of the Rules and the mandatory gross pool we may have locked in a needlessly expensive and complex market structure. A comprehensive market review must consider the impact of its cost structure on participants and ultimately consumers.

### **Ancillary Services**

37. Costs for ancillary services have risen significantly over recent years and RTANZ has concerns over whether or not competition for their provision is robust enough. RTANZ is also concerned whether or not the System Operator's performance requirements are unnecessarily onerous and that is deterring otherwise efficient providers from entering the market.
38. The Issues Paper analysis is a bit too simplistic. For example, in paragraph 279, it is asserted from figures 81 to 84 that there is a significant level of competition in the North Island instantaneous reserves (IR) market. The inference is then drawn that as the graph in figure 84 for the South Island market looks similar, it must also be similarly competitive. This cannot be

asserted with any confidence. There are only two providers of IR in the South Island and thus it is difficult to conclude there is robust competition without more detailed analysis. It is worth noting that NZAS could offer interruptible reserves if the performance requirements were not so onerous.

39. Paragraph 282 very briefly discusses the difference in frequency-keeping (FK) costs in the two islands. South Island FK costs are correlated with energy prices, as water for FK is foregone energy revenue, and the graph clearly shows this. However, the situation in the North Island appears different as the graph does not show a rise in North Island FK costs in 2001 (as energy costs rose) and neither does it show a distinctive peak in early 2006 as is seen in the South Island.

### **Demand-side participation**

40. The New Zealand electricity market has limited demand-side participation. The Issues Paper sets out information to support the view that demand-side participation is generally undertaken by larger industrial loads. RTANZ considers that this is likely to be the case as it is only these types of electricity consumers that are provided with price signals. It might be considered illogical that in order to manage dry year risk, manufacturing processes and export earnings are sacrificed when domestic loads such as spa pools and floodlighting remain on.
41. NZIER concluded in their 2005 Market Design Review that three gaps existed in the market, the third being:

*“How to get demand-side participation from consumers of electricity, primarily to assist to efficiently manage New Zealand’s dry-year risk but also to restrain any tendency towards uncompetitive market outcomes.”*

NZIER provided a possible solution to fill this gap which consisted of the provision of dry year price signals to the mass electricity consumer market thereby providing incentives for increased demand management. NZIER’s solution does not appear to have been progressed by the Commission and no alternative solution developed. This lack of progress is an issue in itself.

42. Demand-side participation can potentially provide benefits by reducing load to relieve energy supply and transmission constraints, providing ancillary services, assisting in local distribution capacity management, deferring the need for transmission investment. Unfortunately, there is little consistency and coordination between the limited signals that exist and the way that these are passed through to the demand-side.
43. As detailed in paragraph 3 of this submission the original objectives for the market included “vigorous competition” from demand-side participation to meet increased demand. A major issue for the market must be its failure to meet this key objective. RTANZ considers that the current Commission workplan does not adequately address the issue of increasing demand-side participation.

## Summary

44. The Issues Paper is not an issues paper but rather a good compilation of available market information and some initial observations. Given the general nature of the paper and the information, the current round of consultation may not identify all the key issues. The structure of the Review and the Next Steps (chapter 5) section of the Issues Paper does not set out the process through which the issues will be identified, defined and assessed. RTANZ considers that the issues must be clearly defined before attempting to develop solutions.
45. RTANZ has provided this submission in order to stimulate debate and raise potential issues in some key areas of the market.

## General

46. We would be happy to discuss any questions or comments you may have in relation to the points made above. If you would like to discuss our comments further, please contact me.

Yours faithfully

A handwritten signature in black ink, appearing to read 'M Scotton', with a long horizontal flourish extending to the right.

Michael Scotton  
Power Manager