

12 July 2017

Australian Competition and Consumer Commission
Level 35, The Tower
360 Elizabeth Street
Melbourne Central
Melbourne Vic 3000

Attention: Eva Wong and Rebecca Holland

By email: retalelectricityinquiry@accg.gov.au

Dear Ms Wong and Ms Holland

Tomago Aluminium Company Pty Ltd - Submission to the ACCC Inquiry into Retail Electricity Supply and Pricing

1 Introduction

Tomago Aluminium Company Pty Ltd (**Tomago**) welcomes the opportunity to provide a response to the ACCC inquiry into retail electricity supply and pricing (the **Inquiry**).

Tomago is concerned that wholesale electricity prices are rising to excessive and unsustainable levels, and that such price increases are exacerbating the financial burden on retail, small business and industrial electricity consumers alike. Further, Tomago believes that these increases are often the product of flaws in the rules that govern the wholesale market coupled with the behaviour of participants in the market, including electricity generators.

Tomago sets out below its concerns, conclusions and suggested actions connected to the scope of the Inquiry.

1.1 Tomago

Tomago is a world scale, primary aluminium smelter that has been operating since 1983. The smelter is located just north of Newcastle in the Hunter Valley in NSW. It produces around 590,000 tonnes of aluminium per annum, directly employs 1,150 staff and contractors and supports around 1,800 jobs in total, and consumes approximately 8,300 GWh of electricity per annum (or around 12% of the total amount of electricity consumed in NSW).

Tomago is an independently managed joint venture that operates on the basis of a tolling model for its joint venture owners. The joint venture owners are Rio Tinto Alcan, Gove Aluminium Finance and Hydro Aluminium.

Tomago makes an annual contribution of approximately \$1.5 billion in revenue to the Australian economy and \$800 million of gross regional product in the Hunter Valley.

Tomago is a wholesale customer in the National Electricity Market (**NEM**) and has power supply and transmission contracts in place until at least 2028. Approximately 5% of Tomago's electricity requirements are currently exposed to the NEM spot price.

Tomago is pleased to provide a response to the Inquiry. In particular, paragraph ix of the Inquiry's Terms of Reference requires the Inquiry to consider 'all **wholesale** market price, cost and conduct issues relevant to the Inquiry'. Tomago wishes to address a range of issues associated with wholesale energy prices and participant behaviour in the NEM. These issues have direct and detrimental impacts on retail and small business purchasers of electricity, as well as larger industrial users such as Tomago.

1.2 Affordability

In recent years, Tomago has observed dramatic increases in the average price of wholesale electricity in the NEM. Tomago believes that these increases have on many occasions been caused by the deliberate behaviour of electricity generators, including the exploitation of the re-bidding rules set out in the National Electricity Rules.

Increased wholesale electricity prices have the potential to cause detriment to a range of stakeholders in the energy supply chain. Tomago itself is exposed to spot pricing as a major consumer of electricity, and has incurred significant financial costs as a result of its exposure to the NEM. Tomago considers that the current wholesale prices and market conditions may inhibit its future growth. For example, improvements in the performance of the smelter may lead to increased electricity requirements, but such improvements may not be able to be realised if electricity prices are too high. Further, higher wholesale electricity prices are usually passed on to the retail market, resulting in additional costs being borne by residential and small business customers.

Please refer to section 2 for further detail.

1.3 Declining baseload power and reliability

There are a range of issues affecting the reliability of electricity supply in the NEM, including:

- an excessive reliance in the NEM on solar and wind power, despite the asynchronous nature of these energy sources;
- declining coal-fired electricity generation resulting from policy and price settings that are unfavourable to investment in coal-fired generation; and
- excessive domestic gas prices increasing the costs of acquiring peaking gas-fired electricity, which has the subsequent effect of increased electricity prices throughout the market.

Reliable electricity supply is critical to the smelters operations and interruptions to Tomago's electricity supply can cause potline freezing in a very short space of time. Uncontrolled freezing causes physical damage to the cell, requiring a costly and time consuming rebuild. For a complete potline, repairs can cost in excess of \$100 million and take up to a year to complete, resulting in significant cost and revenue loss. Many purchasers of wholesale electricity face similar risks, and in the event of supply interruption some of these purchasers are in a position to pass on losses to retail customers.

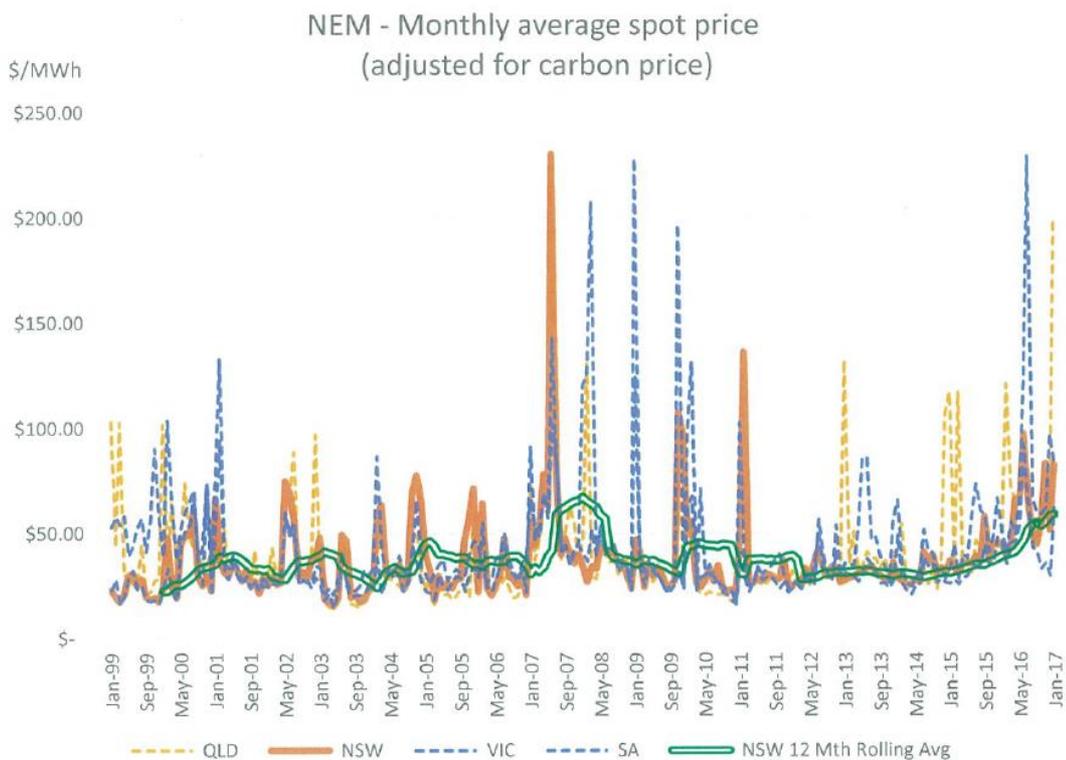
Please refer to section 3 for further detail.

2 Recent increases in wholesale energy prices

2.1 NEM wholesale electricity pricing

Figure 1 below demonstrates the history of NEM spot prices since January 1999. The prices are time weighted monthly average prices, and are adjusted to remove the increase in spot prices that occurred between 1 July 2012 and 30 July 2014 directly due to the imposition of the carbon tax.

Figure 1 – NEM monthly average spot price (adjusted for carbon price)



Since 2014 there is a clear trend of increasing average prices, and some indications of high spikes in the spot price occurring more frequently. The only other period in which average prices reached similar levels was in the period around 2007 when prices rose significantly as a result of generators reducing output due to an extensive and protracted drought.

Tomago believes that, amongst other factors, the behaviour of generators that exercise market power in the NEM has contributed significantly to these wholesale electricity price increases.

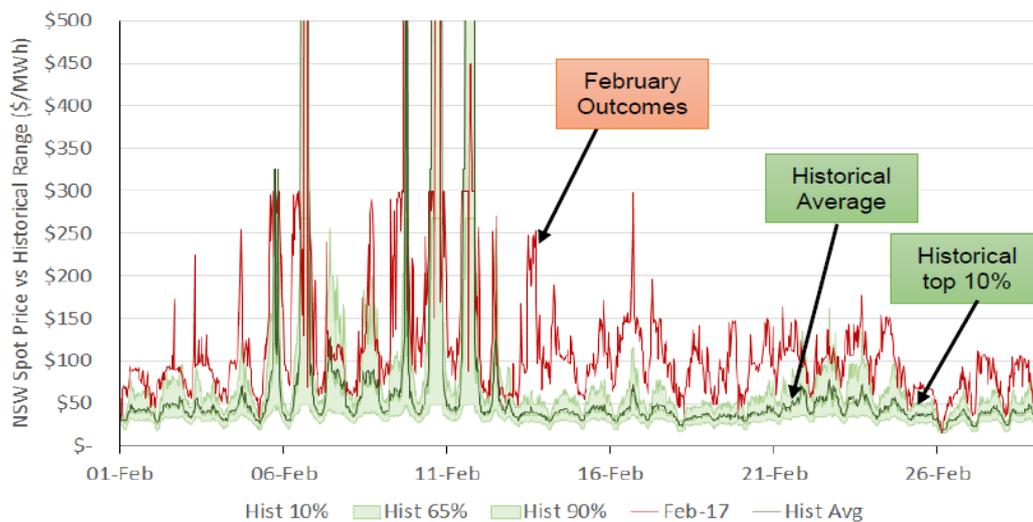
2.2 Wholesale electricity price increases in New South Wales

In March 2017, Energy Edge¹, an electricity market consultant, prepared a report for Tomago on the main factors driving NSW spot market prices in the first quarter of 2017. Amongst other findings, Energy Edge reported that:

- spot market price outcomes in Q1 2017 were significantly higher compared to 2015 and 2016, in terms of both raw outcomes and in a comparison of like-for-like market conditions;
- 88% of price outcomes in Q1 2017 were at or above the top 10% of historical outcomes for similar reserve margin conditions;² and
- the key response that has assisted in mitigating extreme price increases has been reduced electricity usage by industrial and commercial parties, for example Tomago and other industrials curtailing load requirements in periods of supply shortages and price increases.

Figures 2 and 3 below demonstrate that NSW spot market prices in early 2017 were substantially higher than historical levels. The extent and frequency of high spikes in the spot price has also increased dramatically.

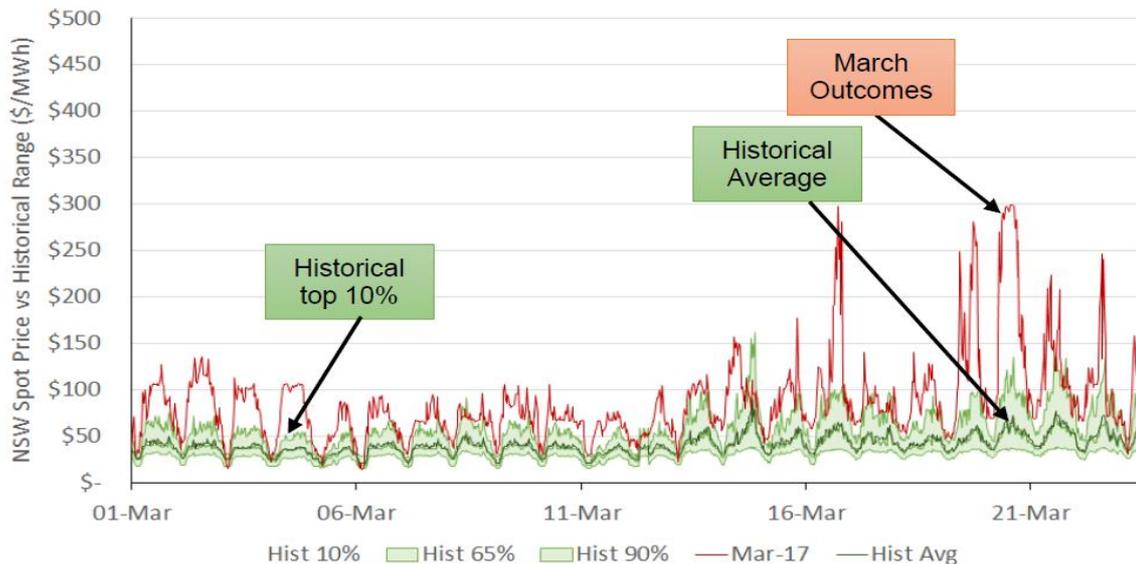
Figure 2 – NSW February 2017 Spot Price Outcomes, Actual versus Historical Ranges



¹ <https://www.energyedge.com.au/>

² The phrase 'reserve margin conditions' relates to the amount of electricity supply available in the market compared to the demand for dispatch at any given time, with the difference between these two points being the 'reserve margin'. The reserve margin is a key driver for prices in the NEM, and is described by Energy Edge as a 'proxy for the supply and demand balance' in the NEM.

Figure 3 – NSW March 2017 Spot Price Outcomes, Actual versus Historical Ranges



2.3 Higher prices affect a range of stakeholders in the energy supply chain

As noted above, Tomago faces substantial economic risk as a result of increasing wholesale electricity prices. In the absence of immediate action to reduce electricity prices in NSW, Tomago may be required to curtail up to 5% of its production at the smelter. This has already occurred at other aluminium smelters, such as the Boyne Smelter in Gladstone where a significant number of jobs were lost following curtailment of part of the load in March this year.

One particularly concerning outcome that may arise in the long term, due to the conditions of the NEM, is the diversion of investment in Tomago (and other businesses in Australia) to offshore alternatives. The joint venture partners that own Tomago have a wide range of other investment opportunities internationally. If Tomago's international competitiveness is undermined by its exposure to excessive wholesale energy prices, long term investment from the joint venture partners will be difficult to obtain.

In addition, retail electricity prices are dependent on wholesale electricity prices, meaning that higher wholesale prices in the NEM exacerbate the already significant financial burden placed on residential and small business electricity consumers across Australia. The concerns and suggestions outlined in this submission are commonly echoed by advocates for lower retail prices, and retail dynamics connected to the wholesale market are central to the subject of the Inquiry.

Many participants in the wholesale electricity market are able to pass their costs on to retail customers. Tomago is not in a position to do this, as aluminium prices are established by the London Metal Exchange trading system. As such, Tomago is a price taker and is unable to recoup its electricity costs in the same manner as many other wholesale electricity purchasers.

3 Baseload power and reliability of supply in the NEM are being undermined

Tomago is concerned about the ongoing decline of baseload power in the NEM. The consistent availability of baseload power in the NEM is being undermined by a confluence of factors, including the closure of coal-fired generators, the reduction of output from gas-fired generators and the disproportionate reliance on asynchronous energy sources such as wind and solar power.

3.1 Decreased production of coal and gas-fired power

In respect of the decreasing supply of electricity from coal and gas, Tomago notes that broad changes in market conditions have challenged the underlying volume of electricity supply in the NEM. For example:

- 5,500 MW of coal or gas-fired generation has exited the market in the last five years in NSW, or around 25% of total production prior to those exits;
- the Hazelwood coal-fired power station in Victoria, a major contributor to the NEM, ceased production in April this year; and
- AGL has announced that it will close the Liddell coal-fired power station in 2022.

Coal is currently the only practical option for maintaining baseload power in the NEM. It is the most reliable and affordable energy source, and the impacts of coal-fired generators shutting down are significant and are felt throughout the entire electricity supply chain. Tomago believes that governments must reconsider the current policy settings that are operating to reduce investment in coal production, as the maintenance of sufficient coal-fired electricity is the only practical way to maintain baseload power in the NEM.

Tomago also notes that the difficulties in accessing affordable gas supply for domestic use in Australia have been widely reported and investigated, including by the ACCC in its 2015-2016 inquiry into the east coast gas market. This limits the extent to which gas-fired peaking generators are able to fill gaps in baseload power when they arise. The costs of electricity throughout the entire market are affected by increasing domestic gas prices.

In addition to being affected by increased electricity prices due to reduced gas supply availability for generators, Tomago also requires its own secure and affordable gas supply. Gas is critical to the aluminium production process, and Tomago consumes around 1.6 million GJ of gas per year. The recent shifts in wholesale gas market dynamics are forecast to result in Tomago's gas expenses increasing by more than 100%.

3.2 Disproportionate reliance on wind and solar power

In conjunction with the reduction of supply from coal and gas-fired generators, the increasing reliance on wind and solar power poses a real and significant threat to the reliability of supply in the NEM. This was acknowledged in the Final Report of Dr Alan Finkel's Independent Review into the Future Security of the National Electricity Market, released on 9 June 2017 (the **Finkel Report**).³ The Finkel Report refers to wind, solar and other asynchronous power sources as 'variable renewable electricity' or **VRE**.

The Finkel Report acknowledges that:

increased penetration of VRE generators and the withdrawal of synchronous generators is reducing the supply of essential security services, such as physical inertia, which historically have been supplied by synchronous generators.⁴

Improving reliability of supply in the NEM is a key focus area for reform outlined in the Finkel Report. To this end, the Finkel Report recommends the introduction of a 'Generator Reliability Obligation'. If implemented, the Generator Reliability Obligation will be placed on new generators, and will aim to 'ensure adequate dispatchable capacity is present in each region' to ensure that the NEM can meet consumer demand for electricity.⁵ The Finkel Report found that

regions with a very high proportion of VRE can present challenges for system reliability. A number of submissions highlighted that, going forward, there will be a need for more dispatchable capacity to be brought forward to the market to complement an increasing proportion of VRE generators like wind and solar photovoltaic.⁶

For these reasons and further to the findings of the Finkel Report, Tomago submits that:

- reform is needed to foster an increase in electricity production to ensure there is sufficient baseload power in the NEM. The primary aim of this reform should be to facilitate additional coal-fired generation. As a supplementary measure, governments should introduce measures to ameliorate the effects of declining coal production, for example via more effective mechanisms for planning for and responding to coal-fired power plant closures;
- increasing domestic gas prices limit the ability of gas-fired peaking generators to fill gaps in baseload power in times of shortages. Higher gas prices also have the effect of increasing electricity prices throughout the market; and
- new VRE developments must be stapled to firm dispatchable generation to ensure reliability and security throughout the NEM. As it stands, VRE generators do not provide sufficiently reliable electricity supply to warrant the substantial uptake in their development.

³ The Finkel Report is available at <http://www.environment.gov.au/energy/publications/electricity-market-final-report>

⁴ The Finkel Report, page 32.

⁵ The Finkel Report, page 100.

⁶ The Finkel Report. page 98.

4 Conclusions and suggested actions

4.1 Conclusions

Wholesale electricity prices have increased dramatically in recent years. Tomago believes that these increases have on many occasions been caused by the deliberate behaviour of electricity generators, including the exploitation of the re-bidding rules set out in the National Electricity Rules.

Increased wholesale electricity prices have the potential to cause detriment to a range of stakeholders in the energy supply chain, including industrial users such as Tomago, as well as residential and small business customers.

Further, the consistent availability of baseload power in the NEM is being undermined by a confluence of factors, including the closure of coal-fired generators, the increasing cost of gas-fired generation and the disproportionate reliance on asynchronous energy sources such as wind and solar power.

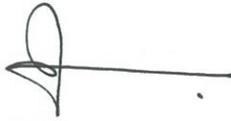
Urgent action is required to address the issues raised in this submission.

4.2 Suggested actions

Tomago proposes the following action to address the issues raised in this submission:

- the rules allowing generators to re-bid at any time up until each five minute dispatch interval must be tightened further to preclude generators from bidding extremely high prices without cause for doing so;
- the 30 minute trading interval should be aligned to the five minute dispatch interval, meaning settlement prices will be calculated more frequently and will be less susceptible to manipulation by generator bidding behaviour. This reform would overcome the market distortions occurring due to the disparity between dispatch and settlement timeframes. Tomago understands that the AEMC is [currently considering](#) a rule change that would achieve this outcome. Tomago encourages any action that supports and fast-tracks this rule change coming into effect;
- a separate mechanism should be introduced allowing generators that only operate occasionally in times of supply shortages (eg gas peakers) to recoup their costs. This would in turn allow the NEM Price Cap to be set at a more reasonable level and would assist in protecting electricity purchasers from excessive spot prices made possible by a very high Price Cap;
- governments should consider re-shaping policies that hinder investment in coal -fired generation, as coal is currently the only viable source of consistent and stable baseload power in the NEM;
- regulators such as the Australian Energy Regulator and/or the ACCC should have additional powers to enforce the National Electricity Rules, including the re-bidding rules described above, to ensure that generators do not take advantage of these rules in pursuit of increasing their windfall gains; and
- obligations such as the Generator Reliability Obligation raised in the Finkel Report should be placed on generators, particularly VRE generators, to ensure that any VRE generation is stapled to firm dispatchable generation to protect security and reliability in all regions of the NEM.

Yours sincerely



Steve McIntyre
Chief Financial Officer and Company Secretary