New Zealand Equity Research
25 October 2019

FORSYTH BARR

# Electricity Sector

## RIO Cries “Wolf”

**Andrew Harvey-Green**
*andrew.harvey-green@forsythbarr.co.nz*
+64 4 495 8185

**In our view Rio Tinto’s (RIO) decision to announce a strategic review of the future of NZ Aluminium Smelters (NZAS) is a case of crying “wolf”. We believe the likelihood of closure is low (less than 10%) and that the announcement of the strategic review is primarily an effort to obtain lower transmission charges. Nevertheless, the decision has shaken the sector out of its complacency that NZAS closure risk was negligible and once again puts the threat of NZAS closure in the front of investors’ minds.**

### Strategic review announcement reveals NZAS frustration over transmission prices

RIO has announced a strategic review of NZAS, citing high electricity and transmission costs, difficult trading conditions and upcoming capex. In announcing the strategic review, NZAS commented repeatedly about its high transmission prices. We believe NZAS is looking to circumvent the Electricity Authority’s (EA) transmission pricing reform (TPM) process by applying pressure to politicians (and the regulator). The TPM is showing ever diminishing benefits for the smelter. In 2015, the EA’s draft TPM proposal saw NZAS benefiting more than $50m per annum. That upside is now little more than $10m. We have sympathy for NZAS’s position that it is paying for North Island grid upgrades that it gets no benefit from. There is a deal to be done given if NZAS were to close, all consumers would wear increased transmission costs.

### Closure is unlikely, a sale is more likely and a deal more likely still

We believe closure is unlikely (less than 10%) for many reasons, including the fact that we estimate NZAS is cash positive at present. Given the cost of closure is above $300m, a sale appears more probable, even at a token price. However, we believe a deal is even more likely. The deal may not even be that material but our analysis suggests closing the smelter makes limited sense at present. Given the global trend favouring sustainable aluminium production, NZAS should be well positioned to be a long-term producer of aluminium.

### Meridian Energy (MEL) and Contact Energy (CEN) would be the most impacted by closure

Nevertheless, by announcing a strategic review the threat of closure is once again overhanging the sector. The uncertainty the review creates means it is unlikely there will be any generation build announcements in the near-future.

If NZAS were to close, MEL and CEN will be the most affected because transmission constraints will curtail their far-south hydro generation for two to three years. Even after a transmission upgrade, there is likely to be North Island/South Island price separation favouring North Island generators. Seven years ago, when RIO last threatened closure, Genesis Energy (GNE) was expected to be greatly impacted because of its long-dated, out-of-the-money take-or-pay gas contracts. Those contracts are almost at an end, meaning GNE is no longer the most impacted.

**Investment View**

Whilst we have not made any adjustments to our sector valuations or earnings at this stage, we estimate the potential value impact on CEN and MEL to be between -9% and -19% and between -3% and -12% for the other generator/retailers. Given share prices have fallen between -5% and -10% since the NZAS announcement, and our view that closure is unlikely, we see limited further downside risk (pending the completion of the strategic review).

# Chances of closure small — the reasons why we believe RIO is crying "wolf"

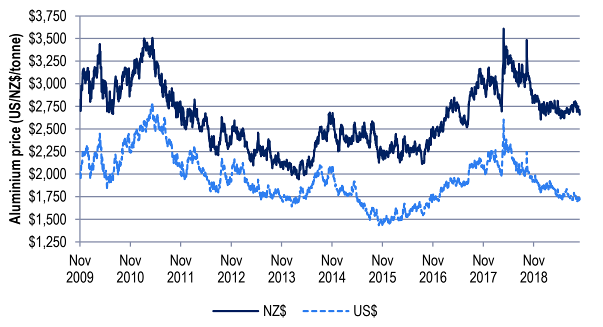
In our view there are many more reasons why NZAS is likely to stay open as opposed to close, such that we place a probability of less than 10% that RIO will indeed decide to close NZAS.

### Aluminium prices aren't that bad

NZAS is quoted as saying aluminium prices have fallen -25% since last year. They haven't. In USD terms aluminium prices are currently ~US$1,750/tonne. To have fallen -25%, prices had to be ~US$2,330/tonne last year, which they were for less than a week. -15% is a better estimate of the price fall. In NZD terms aluminium prices are currently ~NZ$2,750/tonne, down ~-11%. Whilst not great, we view an 11% movement as normal for commodity prices.

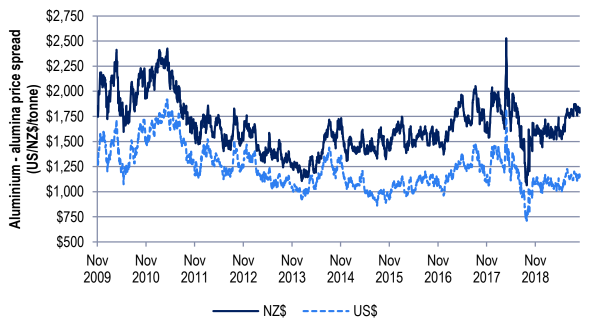
In addition, when alumina prices are factored in (the key input variable cost), the current NZ$ spread is ~NZ$1,800/tonne, which is better than most of the last eight years, including 2012/13 when MEL and RIO were last in detailed price discussions.

**Figure 1. 10-year historic aluminium prices**




Source: IRESS, Bloomberg, Forsyth Barr analysis

**Figure 2. 10-year historic aluminium – alumina price spread**




Source: IRESS, Bloomberg, Forsyth Barr analysis

### Still cash flow positive

Our analysis indicates that NZAS is still cash flow positive and is in a better position now than a year ago. In fact we estimate profitability now is similar to the period leading up to NZAS's decision to re-open the fourth pot-line — the electricity contract for which was signed on 1 May 2018 (just before the big price spike). Yes, there was a significant period of volatility after April 2018 (when aluminium prices fell and alumina prices briefly spiked), but that is not unusual in commodity markets and 2019 has been far less volatile. We estimate current cash profitability (pre-interest and tax, post maintenance capex) is currently ~NZ$300/tonne, implying cash EBIT of more than NZ$100m per annum.

**Figure 3. Estimated cash EBIT/tonne**


Source: IRESS, Bloomberg, Forsyth Barr analysis

### High closure costs

It is well known that the smelter closure costs are high. NZAS's 2018 financial statements include a rehabilitation and closure provision of $NZ256m — which is a present value estimate of rehabilitation costs as at 31 December 2030 when the current electricity contract expires. We estimate the rehabilitation cost is, therefore, ~NZ$330m. We believe there will be additional closure costs over and above the provision, hence, that should be treated as a conservative estimate.

### Sale is more likely than closure

We believe that a sale of the asset is more likely than closure. Whilst NZAS (along with RIO's other Pacific Aluminium assets) has been up for sale in the past, it is hard to believe there is not a buyer for NZAS at $1 — which would be a better financial outcome than closure.

### NZAS re-opened its fourth pot-line 12-months ago

It is surprising that NZAS's views of the world have changed so materially in the last 12-months. Re-opening the fourth pot-line was not a trivial exercise and clearly RIO had a positive medium-term view on aluminium at that time. NZAS signed the contract for additional electricity on 1 May 2018 and officially re-opened the pot-line on 6 December 2018. Our analysis above suggests the economics are actually better than 12-months ago, not worse.

### RIO has been pushing low emission sourced aluminium — NZAS produced using renewable electricity

In recent years, RIO has been talking up its RenewAl branded aluminium — aluminium made from low emission electricity. NZAS aluminium is renewably sourced, with Manapouri production not far short of NZAS electricity demand in an average hydrology year. At the very least, RIO's marketing of renewable aluminium points to an awareness of wanting to produce aluminium from sustainable sources. In that regard, NZAS is a well-placed aluminium producer as minimising carbon emissions becomes increasingly important.

### 16 months ago MEL received a bonus under the electricity contract

Highlighting the volatility in commodity markets (and therefore making NZAS's decision appear knee-jerk on pure market dynamics), MEL received a bonus payment because May 2018 aluminium prices were above the threshold for a top-up payment for the first time.

### No sign of an asset write-down or going concern issues

We note that NZAS's 2018 financial statements included a fixed asset value of NZ$427m and there was no asset write-down. In addition, there is no indication of a going concern issue. The financial statements were signed off in March 2019 and our estimate of market conditions is that things have improved since then.

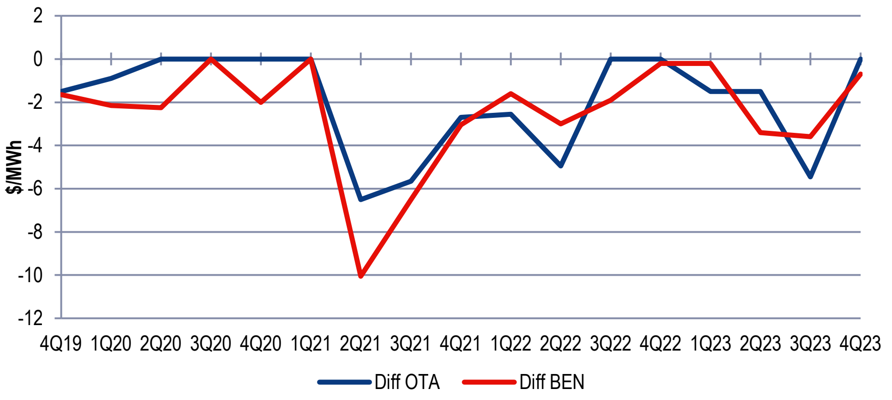
### 21% Japanese ownership

Sumitomo Chemical Company owns 20.64% of NZAS and its main investment rationale is to secure aluminium supply. We would be surprised if closure of NZAS is something Sumitomo supports given the different investment thesis, particularly if Sumitomo is a major user of NZAS's high purity aluminium.

### Electricity sector does not appear to believe NZAS will close

If the electricity sector believed that there was a significant chance of NZAS closing we would expect to see a material impact on futures electricity prices, particularly at the Benmore node. In reality, there has been relatively little change, with winter 2021 prices down the most — just -$8/MWh. Whilst it is early days (the market has only had two days to process RIO's bombshell) and volumes are light (particularly in the later contracts), the initial modest reaction suggests to us that the electricity market does not believe NZAS will close.

Figure 4. Difference between futures contracts pre and post RIO announcement




Source: IRESS, Forsyth Barr analysis

# This is all about transmission prices

In our view, NZAS's decision to undertake a strategic review is all about NZAS's frustration with the transmission pricing review. In its 2015 paper, the Electricity Authority (EA) dangled a $50m+ transmission charge reduction in front of NZAS. That has been whittled down to $11m in its most recent 2019 paper. Add in the fact any transmission charge changes are likely to be several years away and NZAS's frustration is understandable.

NZAS currently pays between $65m and $70m in transmission fees annually to Transpower but that will reduce from 1 April 2020 ~-$12m due to Transpower's regulatory electricity price reset, so NZAS is about to get a modest benefit in any case.

In addition, the EA has previously suggested allowing the likes of NZAS to "negotiate" a transmission cost if closure was a possibility — noting that if NZAS were to close its transmission charges would be picked up by other consumers in any case. After consultation the EA sensibly dropped the proposal, but it does show the regulator understands there is a deal to be done around transmission prices.

Figure 5. EA transmission charge proposals

| $m | Transmission interconnection charges at that time | Proposed new charge | Difference | Comment |
|---|---|---|---|---|
| 2015 proposal | 63 | 10 | (53) | There were a range of options considered - the "proposed" figure is a mid-point |
| 2016 proposal | 61 | 40 | (21) | |
| 2019 proposal | 56 | 44 | (11) | The current charge is actual 2021/22 estimate after Transpower price reset |

Source: EA, Forsyth Barr analysis

We are sympathetic to NZAS's arguments that it is paying too much for transmission. Much of the recent increases in its transmission charges relate to North Island grid upgrades that NZAS does not benefit from. This is the fundamental issue the EA has been trying to address with its transmission pricing reform. However, finding a solution is not simple and transmission prices are a political issue given Auckland and far north consumers will pick up the bill for any reduction in transmission charges to lower South Island consumers. Lowering NZAS's transmission costs now would also cut across the regulatory process, despite it being a pragmatic solution. So whilst we see this as the easiest way to lower NZAS operating costs, achieving it will not be easy.

# Reasons why RIO could close

### RIO expects a significant downturn in aluminium prices

RIO has indicated that "the aluminium industry is currently facing significant headwinds with historically low prices due to an over-supplied market" and that it believes the short to medium term outlook for the aluminium industry will be challenging. As noted earlier, we struggle to square RIO's arguments that profitability is down (maybe on an accounting basis, but a cash basis looks ok). In addition, commentary we have read suggests the outlook is mixed at worst. Whilst there is more capacity coming on stream and demand growth is slowing (due to the global economy slowing), alumina prices are expected to remain low through 2020, aiding aluminium producer profitability.

### Avoiding a modest capex cost on the near future

MEL has indicated that one of NZAS's pot-lines requires ~NZ$60m of capex. It is logical for a capex intensive business to review its operations when a capex investment is due. It equates to ~NZ$160/tonne but is a small cost relative to closure costs.

# NZAS has a weaker bargaining position in 2019 vs. 2012/13, but it still has some strong cards it can play

NZAS's main bargaining chips are the impact closure would have on the Southland economy and the electricity sector. However, we believe NZAS's bargaining position with the industry and Government is weaker now than in 2012/13 when NZAS last negotiated a significant change to its electricity contract for several reasons:

- The 2012/13 discussions took place ahead of MCY, MEL, and GNE listing on the share market (although concluded after MCY listing). There is no similar imperative now.
- The market is better able to handle NZAS closure due mainly to GNE's gas contracts starting to ramp down in the near future.
- Future demand growth looks more certain now than it did in 2012/13, further reducing the impact of closure.
- Minister Dr Megan Woods has stated up front there are going to be no government subsidies.
- We suspect some politicians would not mind seeing the smelter close if it meant lowering emissions and lower electricity prices. We note the Government's 100% renewable electricity target and the fact that closing NZAS would help achieve that goal.

The bargaining points that have moved in NZAS's favour are the proximity of the next election (we note NZ First media comments indicate it is more amenable to supporting the smelter), the desire for the sector to start building new generation and ongoing swaption replacement discussions (although we note there are break clauses in the current contract is NZAS were to close).

# Closure implications

Whilst we place a low probability on the closure of NZAS (below 10%), there are several key implications on the electricity sector. The exact magnitude of the impact is difficult to assess with many different variables at play. That said, in broad terms, we expect significant disruption in the short-term as the transmission system is designed assuming there is NZAS load in the far south (i.e. far south generation would be constrained). However, after appropriate transmission investment and thermal generation plant closure, the market could well be back in balance with wholesale electricity prices not materially different.

The secondary effect will be increased transmission costs following transmission construction. We estimate an additional $10m to $15m of transmission costs for alleviating the lower South Island transmission constraints. Upgrading the HVDC link is likely to add between $15m and $20m to HVDC costs (which are currently paid by the South Island generators).

### Other implications/considerations

**Pause on new build**

The NZAS announcement has once again increased uncertainty in the electricity market. In the past year the sector had grown more confident around electricity demand growth and MCY and GNE (through Tilt Renewables) are building two new wind farms. These wind farms are committed, so will go ahead.

However, we had expected MEL to announce it too was pushing ahead with a new wind farm build in Hawkes Bay within the next six months (and ironically it has this week received the revised resource consent it was seeking). CEN is also looking closely at its Tauhara geothermal option. It is hard to see these investments going ahead with NZAS closure risk once again overhanging the sector.

**Closure creates more certainty**

There is a silver lining if NZAS was to close — it will remove the uncertainty and the regular gamesmanship that having a 13% offtake customer creates.

**Potential for new energy intensive industries to enter the market**

NZAS has long enjoyed a low electricity price, (although until the middle of 2017 it was close to the spot wholesale electricity price). If NZAS were to close, it would potentially make it easier for new energy intensive industries to enter the market and easier for coal-fired South Island industrial heat to convert to electricity.

# Possible deals that could be done

### Market deals

It is possible that the generators/retailers again sharpen their pencils and offer reduced prices to NZAS. However, given NZAS was happy to pay a higher electricity price to restart the fourth pot-line, and MEL has stated "it does not intend taking one for the team", we suspect that any generator/retailer offer will be relatively limited.

### Government deals

Minister Dr Megan Woods has ruled out a direct subsidy (the Government made a direct $30m payment in 2013). For reasons stated earlier, we believe that this is unlikely to be repeated.

The obvious win would be to push through lower transmission prices for NZAS. However, with transmission pricing in the middle of a regulatory process, giving NZAS special treatment will set a bad precedent — no matter how pragmatic the solution is.

NZAS is targeting the end of March 2020 to complete its strategic review. In our view that appears an optimistic timetable as in the past electricity price negotiations have taken well over a year.

# Near-term market implications

The biggest issue for the market is the uncertainty that possible closure creates. If NZAS were to close it is very difficult to estimate the effects — as there are a multitude of moving parts. The most important variable is the underlying wholesale electricity price without NZAS demand, and how much of that is passed through to customers.

At this stage we have estimated, *for information purposes* only, the possible financial impacts of NZAS closing for each of the generator/retailers. We have not adjusted our valuations or earnings forecasts in this note.

Our analysis factors in:

- Loss of NZAS sales

- Lower wholesale electricity prices (we assume a pass through to end consumers of between -$10/MWh and -$25/MWh)
- Curtailed lower South Island hydro generation
- Lower thermal generation
- Higher transmission costs

The summary EBITDAF, NPAT, dividend (assuming 100% of NPAT reduction comes out of the dividend) and value effects are noted in Figure 6 below. We believe that the electricity market will adjust reasonably quickly to NZAS demand exiting the market, such that there is a strong argument that the wholesale electricity price dip will be temporary (notwithstanding our view that the futures electricity prices are ~$10/MWh higher than long-term sustainable levels). Therefore, when estimating the value impact, we have applied a low PE multiple of 5x.

The most impacted companies from the NZAS closure are:

- MEL and CEN due to their South Island generation being curtailed.
- Whilst MEL has the lowest cost of generation, it is also the largest generator, so will be impacted the most from wholesale electricity price changes.

We expect GNE, MCY and TPW to be the least impacted stocks. By the time transmission constraints in the far south are alleviated, GNE will be no longer long-gas. In addition, whilst it will have to close the most thermal plant, its coal and gas fired generation do not make much EBITDAF.

**Figure 6. Estimated earnings, dividend and value impact if NZAS closed**

| | Sector | | CEN | | GNE | | MCY | | MEL | | TPW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High |
| **Medium-term EBITDAF impact ($m)** | **(577)** | **(1,225)** | **(128)** | **(274)** | **(32)** | **(115)** | **(73)** | **(180)** | **(325)** | **(610)** | **(19)** | **(47)** |
| Underlying EBITDAF ($m) | **2,325** | **2,325** | 480 | 480 | 380 | 380 | 490 | 490 | 760 | 760 | 215 | 215 |
| EBITDAF reduction (%) | **-25%** | **-53%** | -27% | -57% | -8% | -30% | -15% | -37% | -43% | -80% | -9% | -22% |
| **NPAT ($m)** | **(415)** | **(882)** | **(92)** | **(197)** | **(23)** | **(83)** | **(53)** | **(129)** | **(234)** | **(439)** | **(14)** | **(34)** |
| EPS (cps) | | | (13) | (28) | (2) | (8) | (4) | (10) | (9) | (17) | (4) | (11) |
| FY20 dividend forecast (cps) | | | 39.0 | 39.0 | 17.4 | 17.4 | 15.8 | 15.8 | 21.6 | 21.6 | 34.0 | 34.0 |
| Potential dividend reduction (%) | | | -33% | -71% | -13% | -47% | -24% | -60% | -42% | -80% | -13% | -32% |
| Value impact (PE of 5x) ($m) | **(2,076)** | **(4,411)** | (460) | (986) | (115) | (414) | (263) | (647) | (1,169) | (2,196) | (68) | (168) |
| Additional short-term effects (pre-transmission work) | **(288)** | **(346)** | (144) | (173) | - | - | - | - | (144) | (173) | - | - |
| Total value impact ($m) | **(2,364)** | **(4,757)** | (604) | (1,159) | (115) | (414) | (263) | (647) | (1,313) | (2,369) | (68) | (168) |
| Total value impact ($/share) | | | ($0.84) | ($1.62) | ($0.11) | ($0.40) | ($0.19) | ($0.48) | ($0.51) | ($0.92) | ($0.22) | ($0.54) |
| Share price movement post-announcement ($/share) | | | ($0.83) | ($0.83) | ($0.17) | ($0.17) | ($0.43) | ($0.43) | ($0.47) | ($0.47) | ($0.40) | ($0.40) |
| Potential value reduction (vs. pre-announcement) (%) | -7% | -14% | -10% | -19% | -3% | -12% | -4% | -9% | -9% | -17% | -3% | -6% |
| Share price movement (%) | -8% | -8% | -10% | -10% | -5% | -5% | -8% | -8% | -9% | -9% | -5% | -5% |

Source: Forsyth Barr analysis

### Share price reaction appears overstated given low probability of closure

For most of the electricity stocks, it appears that the market has fully factored in the lower end of our estimated value impact from NZAS closing, and apportioned a ~50% chance of closure relative to the upper end of the value impact range. We estimate that the chance of closure is less than 10%.

That said, we note that the electricity stocks are trading on record multiples and there is significant market distortion due to MSCI changes. Hence, there are other factors at play in the share price movements.

We note below the current trading multiples for each of the electricity stocks.

**Figure 7. EBITDAF multiples**

| Company | Code | Price | Target Price | Target Return | Rating | Mkt Cap $m | EBITDAF (x) FY20 | EBITDAF (x) FY21 | EBITDAF - capex (x) FY20 | EBITDAF - capex (x) FY21 |
|---|---|---|---|---|---|---|---|---|---|---|
| Contact Energy | CEN | $7.69 | $8.22 | 12.0% | NEUTRAL | 5,502 | 13.8 | 13.1 | 16.4 | 15.5 |
| Genesis Energy (excl Kupe) | GNE | $3.09 | $3.28 | 11.8% | NEUTRAL | 2,792 | 14.4 | 12.4 | 17.7 | 14.8 |
| Mercury | MCY | $5.02 | $4.55 | -6.2% | UNDERPERFORM | 6,832 | 15.4 | 15.0 | 18.1 | 17.5 |
| Meridian Energy | MEL | $4.95 | $4.25 | -9.8% | UNDERPERFORM | 12,687 | 17.2 | 18.3 | 18.6 | 19.9 |
| Trustpower | TPW | $8.20 | $8.00 | 1.7% | OUTPERFORM | 2,566 | 14.9 | 14.6 | 16.9 | 16.5 |
| **Sector Average** | | | | | | | **15.1** | **14.6** | **17.5** | **16.7** |
| Genesis Energy (incl Kupe) | GNE | $3.09 | $3.28 | 11.8% | NEUTRAL | 3,159 | 11.8 | 10.7 | 13.9 | 12.4 |

Source: IRESS, Forsyth Barr analysis

**Figure 8. PE multiples and dividend yields**

| Company | PE (x) FY20 | PE (x) FY21 | Adjusted PE (x) FY20 | Adjusted PE (x) FY21 | Cash Div Yield FY20 | Cash Div Yield FY21 | Gross Div Yield FY20 | Gross Div Yield FY21 | Free Cash Flow Yield FY20 | Free Cash Flow Yield FY21 |
|---|---|---|---|---|---|---|---|---|---|---|
| Contact Energy | 34.9 | 31.6 | 22.1 | 20.8 | 5.1% | 5.1% | 6.3% | 6.5% | 4.2% | 4.9% |
| Genesis Energy (excl Kupe) | 106.9 | 47.6 | 29.0 | 20.1 | 3.8% | 4.5% | 5.3% | 6.2% | 3.5% | 5.0% |
| Mercury | 44.6 | 37.9 | 27.7 | 24.7 | 3.1% | 3.2% | 4.4% | 4.5% | 1.6% | 2.9% |
| Meridian Energy | 42.3 | 47.8 | 26.4 | 28.8 | 4.4% | 4.4% | 5.5% | 5.5% | 4.1% | 3.8% |
| Trustpower | 28.0 | 27.2 | 24.4 | 23.9 | 4.1% | 4.3% | 5.6% | 5.8% | 4.5% | 5.3% |
| **Sector Average** | **45.6** | **37.5** | **25.8** | **23.5** | **4.1%** | **4.3%** | **5.4%** | **5.7%** | **3.6%** | **4.4%** |
| Genesis Energy (incl Kupe) | 67.5 | 37.2 | 19.9 | 15.9 | 5.6% | 5.7% | 7.8% | 7.8% | 5.2% | 6.2% |

Source: IRESS< Forsyth Barr analysis