

The Treasury

New Zealand Aluminium Smelters (NZAS) Information Release

September 2013

Release Document

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In preparing this Information Release, the Treasury has considered the public interest considerations in section 9(1) of the Official Information Act.

Treasury Report: Project 14: initial advice

Date:	12 July 2012	Report No:	T2012/1470
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Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Bill English)	Note contents and discuss with officials	Monday 16 July
Associate Minister of Finance (Hon Steven Joyce)	Note contents and discuss with officials	Monday 16 July
Minister for State Owned Enterprises (Hon Tony Ryall)	Note contents and discuss with officials	Before Mark Binns calls you on the afternoon of Friday 13 July

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
Juston Anderson	Senior Analyst, Commercial Transactions Group	04 8907211 (wk)	[1] (mob)	✓
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Actions for the Minister's Office Staff (if required)

Return the signed report to Treasury.

Enclosure: No

Treasury Report: Project 14: initial advice

Executive Summary

As requested, this report provides preliminary advice on the impact of Pacific Aluminium's (PA's) approach to Meridian to renegotiate its contract for electricity.

What has Pacific Aluminium asked for, and why?

- PA has asked for its contract with Meridian to be renegotiated so that the price it will pay for electricity from 2013 onwards is reduced from around [2] to around [2].
- PA's proposal can be seen as an attempt to ensure its profitability under a pessimistic forecast for the \$NZ exchange rate and aluminium prices, while allowing for significant upside if market conditions improve.
- [4]

Impact on Meridian

- Meridian has estimated NZAS' proposal as roughly [2] of value transfer from Meridian to NZAS in the first year, presumably rising over time if NZAS locks in a price of around [2] without significant escalation clauses.
- [4]
- [5,6]
- Meridian would have much more limited cashflow, severely restricting its ability to pay dividends and to undertake new construction, either in New Zealand or elsewhere.
- the impacts of Meridian declining NZAS' proposal depend on what NZAS does in response, but in a worst-case, unlikely scenario of a rapid exit by NZAS (inconsistent with the terms of NZAS' contract with Meridian), Meridian's very rough indicative estimate is a financial cost to it of [2] to [2] per year for the first three years. After this, the cost to Meridian of an NZAS exit reduces.
- [2,4,5]
- these results should be taken with very significant caution. Meridian advises that modelling the various scenarios, including impacts on the market and participant

behaviour, are non-trivial. Meridian is undertaking significant further modelling, which is expected to produce staged results over 2, 4 and 8 week periods.

- [2]

- [2,4]

- the option of Meridian negotiating to buy the smelter from PA is not feasible. Even if Meridian could buy the smelter for \$1, it would not be sustainable as a stand-alone business, particularly when PA owns the mines that supply the smelter.

Impact on the electricity market

- the Ministry of Business, Innovation and Employment (MBIE) advises that its initial modelling suggests a NZAS exit would lead to:
 - wholesale electricity prices roughly 10% lower than the reference scenario over the 2015-2030 period
 - no major new generation projects built between 2014 and 2019
 - a total of \$2 billion in avoided investments and cost savings, in net present value terms, from not having to build new generation until 2019 (including fuel savings). This would be partially offset by \$200 million of new spending on transmission

Impacts on the Government share offers

- the potential impacts on the Government share offers are clearly significant. We see two broad classes of impact:
 - where the potential for NZAS to exit remains unresolved and is a source of ongoing uncertainty
 - where the situation is resolved: either NZAS announces an exit (so market participants can plan and react to this) or the potential for NZAS exiting reduces sufficiently (which is less likely)

- [4,5]

- [4,5]

[4,5] The sale proceeds for the Crown would be lower than previously estimated, but this would genuinely reflect the fact that the companies were worth less due to the significant change in market conditions.

Economic Impacts

- the decommissioning of NZAS would likely lead to both positive and negative effects on the New Zealand economy. The net impact in the long run would depend on the value created and prices paid by alternative users of the resources that are freed up, compared with the prices and taxes currently paid by NZAS.
- the principal positive effect relates to the release of an additional 12% of electricity supply (currently contracted to NZAS at a discounted price) to the national market. This additional supply would likely result in lower prices, lower thermal fuel expenditure and a deferral of investment in new generation (around \$2 billion in NPV terms).^[2,5,7]
- the principal negative effects relate to the requirement to invest in additional grid capacity to transmit this supply (around \$200 million), the potential for hydro spillage due to transmission constraints (yet to be quantified), and to the adjustments that will need to take place in Southland's labour and other supplier markets.
- the short-term negative effects on the Southland economy could be significant, with NZAS accounting directly for 1.5% of the regional labour force and providing approximately \$60 million of revenue to local suppliers. The size of the long-term impact will depend on how many people are unable to find new employment in Southland and decide to relocate.
- the later the decommissioning, the greater the opportunity to maximise potential benefits and minimise costs (particularly those associated with transmission constraints and investment).
- there would be important distributional effects, with lower prices entailing a transfer from electricity producers to consumers. The greatest benefits are likely to accrue to energy-intensive commercial users in the South Island.
- the overall impact on the current account balance would be negative, with the cessation of aluminium exports and increased aluminium imports partially offset by reduced imports of alumina and other raw input materials and a decline in investment income going abroad.
- MBIE has been consulted on the economic impacts and is comfortable with our conclusions

Our advice

From a national welfare perspective, the situation seems straightforward. Any request by PA for Government assistance should be rejected, because it would result in a significant transfer of value from New Zealanders to PA and Rio Tinto shareholders. The estimated value transfer from New Zealanders is roughly ^[2,5,6] per NZAS employee.

[4]

If a rejection of PA's attempt to renegotiate leads to PA deciding to shut down the smelter, the IPOs can still proceed, although the proceeds to the Government will be significantly reduced.

Communications

There is a significant risk that knowledge of this issue will become public soon, either from an announcement by NZAS, PA or Rio Tinto, or otherwise. An announcement is unlikely to happen until Meridian responds to PA, which we understand is likely to be in the week beginning 23 July.

We understand Mark Binns will call Ministers following the board's teleconference tomorrow (Friday 13 July) to update you on the board's discussions.

Recommended Action

We recommend that you **note** the contents of this report and **discuss** with officials

Chris White
Manager, Commercial Transactions Group

Hon Bill English
Minister of Finance

Hon Steven Joyce
Associate Minister of Finance

Hon Tony Ryall
Minister for State Owned Enterprises

Purpose of Report

1. This report provides our initial advice on the New Zealand Aluminium Smelter's (NZAS') request to Meridian to significantly reduce the price NZAS pays for electricity. PA is likely to follow this up with a request to the Government to intervene in its favour.

What has Pacific Aluminium asked for, and why?

2. Pacific Aluminium (PA), is a group of Australian and New Zealand-based assets owned or majority-owned by Rio Tinto. In October 2011 Rio Tinto announced that it was moving these "poor performing" assets into the newly formed PA group, with a view to sale. The New Zealand Aluminium Smelter (NZAS) at Bluff, which is around 80% owned by Rio Tinto, is one of the assets (and the only New Zealand asset) moved into the PA group.
3. We understand that the sale plan for PA has not progressed, and Rio Tinto is now considering a de-merger (i.e. a distribution of PA shares to Rio Tinto shareholders) and ASX listing of PA as an alternative.
4. We understand that:
 - NZAS is currently paying^[2] for electricity (under the "old" contracts dating back several decades)
 - NZAS will pay around ^[2] under the new 2007 contract, which takes effect from 1 January 2013, and
 - the price NZAS pays will be adjusted from 2013 based on a multi-year average price for electricity in New Zealand, the world price for aluminium, and a component reflecting general price inflation.
5. PA, the owner of 80% of NZAS, has approached Meridian stating that:
 - all assets in PA group must be deemed viable in the long term, otherwise they will be removed from the proposed float of the group (i.e. transferred out of PA back to direct Rio Tinto ownership)
 - NZAS is losing money on a cash basis
 - unless the electricity contract for NZAS is renegotiated the plant will not be viable
 - the decision will be made by Rio Tinto but the most probable outcome will be closure, and
 - an electricity price of around ^[2] is required for NZAS to remain viable long-term.
6. Metals production in general is exposed to cycles in prices and exchange rates. The normal strategy to deal with this is the establishment of large businesses with diversified operations around the world (to hedge against regional exchange rate movements) and strong balance sheets (to be able to manage through cyclical lows in metal prices). Rio Tinto is an example of this: it is one of the 500 largest companies in the world, with operations in numerous countries, and it produces aluminium, diamonds, iron ore, copper and other minerals.

7. [3,4]
8. Given the above, the most likely buyer for PA would be another global aluminium or metals group.
9. To date it appears that there are no interested buyers (given that Rio Tinto's original strategy was a 100% trade sale of PA, not an ASX listing). This may be because of a distorted industry structure, with significant "strategic investment" in aluminium production, e.g. from new Chinese smelters which have approximately 50% of global capacity. As a result there is excess smelting capacity globally, downward pressure on aluminium prices, and a focus on investment in larger scale smelters with the closing or divestment of marginal or uneconomic plant.
10. NZAS' position in the world market is:
- 50th of 193 smelters globally by scale (and 26th of 111 non-Chinese smelters)
 - it produces high-purity aluminium, used in specialist applications worldwide (e.g. aircraft, capacitors) which typically receives an 8-9% price premium on world markets^[2], and
 - the smelter has received continued investment and expansion in recent years.
11. Since NZAS consumes around 40% of Meridian's electricity, Meridian has invested considerable effort over a number of years to understanding the financial position of the smelter, within the broader economics of aluminium production. As an aside, media commentary on NZAS' profitability is not reliable. This is because NZAS consists of a number of inter-related subsidiaries, and has complicated and non-transparent contractual relationships with its owners (PA/Rio Tinto and Sumitomo in Japan). While NZAS makes public its financial results, these cannot be relied on without also considering the financial results of related companies in New Zealand, and making assumptions about transactions with the owners of NZAS.
12. [2,4]
13. [2,5,6,7]

14. On the other hand, if the \$NZ exchange rate rose significantly, NZAS would be loss making even if Meridian paid the smelter to take electricity, regardless of aluminium prices.
15. PA's proposal can therefore be seen as an attempt to ensure its profitability under a pessimistic forecast, while allowing for significant upside if market conditions improve.
[4]

Impact on Meridian

16. We understand Meridian has estimated NZAS' proposal as roughly [2] of value transfer from Meridian to NZAS in the first year, presumably rising over time if NZAS locks in a price of around [4] without significant escalation clauses.
[4]
17. The impacts of Meridian declining NZAS' proposal depend on what NZAS does in response. We understand Meridian is considering four scenarios:
 - a. Immediate exit: NZAS advises that it will exit from 1 January 2013, in breach of its contract, but no recovery of costs is possible (the owners of NZAS, PA/Rio Tinto and Sumitomo allow their NZ holding companies to become insolvent). This is clearly a worst-case scenario
 - b. Immediate exit from 1 January 2013, but NZAS compensates Meridian
 - c. Exit from 1 January 2016, which is the earliest "effective date" that NZAS can shut down under the contract with Meridian (given the incentives in the contract)
 - d. Phased exit from 2016: NZAS reduces its production over a 3 year period, as provided for in the contract with Meridian, before shutting down in 2018.
18. Meridian's counterfactual for comparison with these scenarios is that NZAS obtains the discounted pricing that it is seeking, and continues to operate until the expiry of the current contract in 2030. Of course, the other possible counterfactual is that the contract is unchanged and NZAS continues in operation.
19. [2,4,5,6]
20. [2,5]

21. [4]

[2]

22. Meridian's very rough indicative estimate is a financial cost to it of [2] per year for the first three years. This compares to a [2] cost in year 1 of NZAS' proposal.

23. [2,5]

24. Under the counterfactual situation (i.e. Meridian agrees to PA's proposal):

- any financial discount for PA will most likely remain in place until 2030, and will grow relative to rest of market pricing, i.e. the cost to Meridian will increase beyond [2] per year
- [2,5]
- Meridian has much more limited cashflow, severely restricting its ability to pay dividends and to undertake new construction, either in New Zealand or elsewhere
- other electricity producers are unaffected. [2,5]

25. These results should be taken with very significant caution. They are Meridian's estimates of the impacts, from its point of view. Meridian also advises that modelling the various scenarios, including impacts on the market and participant behaviour, are non-trivial. Meridian is undertaking significant further modelling, which is expected to produced staged results over 2, 4 and 8 week periods.

Meridian's likely response to NZAS

26. [2]

27. [2]

28. [2]

29. We understand that given the significance of this issue, the Meridian board may ask management to carry out further modelling next week, and therefore delay a formal response to PA until around 23 July.

30. We understand Mark Binns will call Ministers following the board's teleconference tomorrow (Friday 13 July) to update you on the board's discussions.

Impacts on the electricity market

31. The Ministry of Business, Innovation and Employment (MBIE) has undertaken some initial modelling of the impact on the electricity market in New Zealand if NZAS exits. The high level, tentative conclusions are similar to Meridian's results, although MBIE has taken a wider look at the impacts on the industry. MBIE advises the impacts would be:

- wholesale electricity prices roughly 10% lower than the reference scenario over the 2015-2030 period
- no major new generation projects built between 2014 and 2019
- the two remaining Huntly units are retired in 2018 (rather than one in 2018 and one in 2026 in the reference scenario)
- a total of \$2 billion in avoided investments and cost savings, in net present value terms, from not having to build new generation until 2019 (including fuel savings). This would be partially offset by increased spending on transmission
- less use of gas for the electricity market, resulting in lower gas prices, and therefore positive spin-offs for other gas users. For example Methanex is projected to run for three years longer, with higher profits because of lower gas costs.

Economic impacts

Framework for assessing economic impacts

32. It is important to distinguish between the net effects of the closure of NZAS on the economy and the size of NZAS' current contribution to the economy¹.

33. NZAS' direct contribution to the economy can be measured by the price it pays for labour employed and for the goods and services purchased from local supplying industries, and by taxes paid. Given 100% overseas ownership, NZAS' profits (less taxes) do not accrue to New Zealand, and therefore are not directly relevant to national economic welfare.

¹ NZAS' website states that NZAS contributes 13.5% to Southland's economy. This figure is based on a study conducted by Infometrics in 2005.

34. If NZAS closed, freed-up labour, electricity and other resources would be (after a transition) used for other business activities. The net impact on the economy therefore depends on the value created and prices paid by these alternative uses, compared with the prices and taxes currently paid by NZAS.
35. Multiplier effects, which incorporate the indirect flow-on benefits of a business' expenditure (such as the value of wages spent), are often included in estimates of a businesses' total economic contribution. Because these multiplier effects would also occur as a result of alternative uses, we do not consider them here.

Impact on the national economy

36. The decommissioning of NZAS would have both positive and negative effects on the national economy, principally due to the effects it would have on the electricity market.
37. The main positive impact would be the release of electricity supply, currently priced at a discount relative to the long-run marginal cost of supply, and equivalent to approximately 12% of current total national electricity generation.
38. This release of this supply would lead to an increase in domestic electricity consumption at lower prices, and a deferral of (the cost of) additional investment in new generation. These positive benefits would be boosted substantially if NZAS compensates Meridian for electricity not consumed, i.e. Meridian effectively receives a double-payment, and New Zealand receives a foreign transfer.
39. The principal negative effects would be twofold:
 - (i) The requirement for investment (or earlier investment) in additional transmission capacity, particularly between Manapouri and the national grid, and upgrades to the HVDC link; and energy losses associated with additional long-distance transmission; and
 - (ii) Any 'spilling' of water from hydro stations, and therefore loss of some potential electricity generation, due to transmission constraints.
40. Obviously, the relative size of the positive and negative factors depends on wide range of factors. Two key factors are:
 - (i) The timing of NZAS' closure, with a later closure more beneficial, particularly because it will allow more time for required transmission investment; and
 - (ii) The extent to which wholesale electricity prices actually fall
41. The impact of job losses at NZAS, and of the loss of business to supply industries are likely to be less significant from a national economic perspective compared with the above electricity market effects. However, they will be material for the local Southland economy, especially in the short term as discussed below.

Impact on the Southland economy

Direct and indirect employment effects

42. NZAS employs approximately 870 staff (including 120 contractors), with total employee expenses of \$87 million in 2011. These staff represent approximately 1.5 per cent of the total Southland regional labour force and 0.035% of the national labour force. The majority have vocational qualifications only, or lower. There would also likely be additional redundancies created in local supplying industries, although it is difficult to quantify the likely size of these with the information to hand.

43. The Southland region's unemployment rate (averaging 4.4% over the last year) has remained consistently lower than the national average and employment growth has averaged around 1000 jobs annually over the last 10 years. Against this backdrop, it seems likely that many of the displaced workers will be able to obtain new employment within the region over time.
44. It is likely that the national labour market will be able to absorb those unable to find new employment in Southland. Projected labour shortages associated with the Canterbury rebuild in particular may offer attractive employment opportunities. In the long run, the size of the negative impact on Southland will depend on the extent to which affected workers are unable to find new employment in the region and decide to relocate to other regions.
45. Clearly a later and/or phased shutdown would reduce the negative employment effects of the closure, by allowing staff and suppliers more time to plan ahead for the transition (including retraining), and giving more scope for the labour market to absorb displaced workers. In addition, redundancy payments, employment created by NZAS remediation requirements, and Government support through unemployment benefits and other targeted services, would also help to cushion negative effects.

Industry effects

46. As noted, there would be a significant loss of business to some local industries. NZAS publications indicate annual payments of \$60 million to local suppliers. We do not have detailed information on the profile of NZAS suppliers, but they are likely to mostly comprise businesses providing manufacturing and engineering, transport and business services. Over time these businesses can be expected to find alternative sources of demand. However, the losses will be greater for businesses providing highly specialised services to NZAS with 'sunk investment' in human or physical capital
47. Most obviously there would be a major impact on the Southland Port. NZAS accounted for 48% of total cargo volumes in 2011 and the port has a dedicated wharf and causeway servicing the smelter. In addition, there would be a reduction in the back loading of bulk freight if the major shipping lines that service the smelter ceased their operations.

Impact on ETS related costs

48. An NZAS closure has the potential to significantly reduce greenhouse gas emissions from the electricity sector, particularly to the extent that it may bring forward the expected decommissioning of the coal and gas fired Huntly units 1 to 4, which produces between 20%-50% of the sector's total emissions. It would also obviously eliminate the significant emissions from the smelter itself (0.7% of total NZ emissions in 2008, according to the Rio Tinto website).

Distributional effects

49. There will clearly be significant distributional effects resulting from an NZAS closure. In particular, lower electricity prices entail a transfer from electricity generators to consumers, with the greatest benefits accruing to electricity intensive industries. In addition, transmission constraints mean wholesale electricity prices will likely fall by more in the South Island than the North Island, and in particular by more in Southland. Falls in the electricity prices would reduce inflationary pressures, with electricity carrying a 3.9% weighting in the CPI.

Impact on current account balance

50. The overall (ongoing) impact on the current account balance will be negative (with reduced pressure on the exchange rate at the margin) although there will be some offsetting effects:

Negative

- the annual value of aluminium exported by NZAS was \$1.15 billion in the year to May 2012 representing 2.5% of the value of total merchandise exports and New Zealand's 10th largest commodity export by value (however note the point below about NZAS' inputs – effectively the smelter imports alumina ore plus other materials, runs electricity through it, and then exports the resulting product)
- NZAS claims to export 90% of its product. This implies that closure would require additional imports of aluminium products equivalent to around \$130 million annually to meet New Zealand's needs

Positive

- a substantial portion of NZAS' inputs comprise imported materials, principally alumina and petroleum pitch, as well as imported capital items. We do not have information on the value of imported materials at this point.
 - expatriated profits from NZAS would currently contribute to NZ's investment income deficit
51. The overall effect on the current account balance would evolve over time depending on the extent to which redeployed resources supported import- or export- intensive businesses that were foreign or domestically-owned.

Impacts on the Government share offers programme

52. The potential impacts on the Government share offers programme are clearly significant. We would characterise the impacts as falling into two general classes:
- where the situation remains unresolved and is a source of ongoing uncertainty around the future of NZAS and the impacts on the future price of electricity
 - where the situation is resolved and there is certainty regarding future electricity price impacts.

[4]

53. In the event that Meridian declines the invitation to renegotiate, there is a reasonable chance that PA/Rio Tinto will make the issue public. Even if it does not, however, the due diligence disclosure requirements that the Crown is subject to would mean that the state of the issue would have to be disclosed in any offer documents. In either event the issue will have an impact on investors' willingness to participate and the value they place on New Zealand electricity assets.

54. [4]

55. [4]

56. [4]

[4]

57. [4,5]

The impact, however, would still potentially be significant as sales proceeds would be affected. If the outcome is an immediate exit the materially lower electricity price path would only support significantly lower estimated company valuations than present. In the intermediate scenario where a scheduled phase out is planned the value impact would still be negative but would be less.

58. [4,5]

The sale proceeds for the Crown would be lower than previously estimated^[4] but this would genuinely reflect the fact that the companies were worth less due to the significant change in market conditions.