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9 May 2003

Dr. Ken Michael  
Acting Independent Rail Access Regulator  
Office of the Rail Access Regulator  
27<sup>th</sup> Floor, 197 St Georges Terrace  
PERTH WA 6000

**Re: Weighted Average Cost of Capital for Rail Infrastructure – Draft  
Consultant Report to ORAR**

This Response Paper outlines Alcoa's response to the request from the Regulator for public comment on the Draft Report provided by NECG to the Regulator on the Weighted Average Cost of Capital (WACC) for rail infrastructure operated by WestNet Rail (WNR). We are not providing any comment on the WACC for WAGRC as Alcoa does not utilise any WAGR track. It outlines the issues that Alcoa has identified in the NECG Report which relate to Alcoa's use of the network.

Regulators have over time developed an "accepted" framework for WACC. Within the "accepted" framework are a series of subjective recommendations which relate to the quantum of the measures.

Our response is therefore to propose to the Regulator a position in relation to these subjective recommendations proposed by NECG. The following analysis is not questioning the WACC framework but rather its underlying suppositions. We do, however, note that the report has assumed a change to post tax vanilla WACC rather than a pre tax real WACC, which has been used to date. If this change is adopted (which we accept would be consistent with other jurisdictions) then a corresponding change to the PMT calculation would be required otherwise the change to post tax WACC would inflate the ceiling price calculation.

The final position adopted by ORAR on these suppositions also needs to take into account the precedents of other rail determinations.

Alcoa is in an inelastic export business in terms of capacity and subject to international pricing fluctuations for which it has undertaken considerable investment. This investment has significant multiplier effects on the local economy. Alcoa (and Worsley) operate world class alumina refineries in the South West Region. These refineries operate at maximum capacity to maintain internationally competitive pricing for alumina produced in Western Australia. Alcoa's Kwinana, Pinjarra and Wagerup refineries operate in the bottom quartile of production cost for alumina worldwide and production volumes in Western Australia are expected to continue increasing for the foreseeable future. The tonnage that Alcoa produces and exports has grown steadily since 1963

from an initial 200,000 tonnes to 14.3 million tonnes per annum in 2002. This has required equivalent growth in Alcoa's use of the rail network.

Application of an overestimated WACC particularly with regard to high capacity, inelastic demand businesses has serious competitive implications for those businesses, including Alcoa. A competitive access rate has the potential to assist Alcoa with further expansion of output and therefore increasing export tonnage with benefits for WestNet in increased revenue and flow-on benefits to the local economy. Overestimating the WACC reduces the competitiveness, and provides no benefit in this regard.

The treatment throughout the NECG report with regard to the risk of the rail business is of concern to Alcoa. In selecting the parameter points for the WACC calculation, we are of the view that the Regulator must consider the specific business and not the risk of the total market. The regulated rail infrastructure market is not a risky business. The carriage of bulk minerals in particular carries less risk and when combined with the grain export business represent the majority of Net Tonne Kilometres (NTK's) on the network (Refer Chart 1 - Million Net Tonne Kilometres by Sector, Year to 30 June 1999).

Accordingly the NECG comment in the draft report "that it is socially preferable to err on the side of overestimating WACC rather than underestimating it - the market approach will generally be higher than the alternative methods" is of concern.

Alcoa has considered the contents and substance of the NECG draft report and comments as follows:

**The nominal post tax "vanilla" WACC proposed by Alcoa is 7.9% (compared to the NECG figure of 9.00%).**

This is calculated by incorporating a proposed equity beta of 0.40, a cost of debt at 6.465 (by assuming debt revised issuance cost to be at the lower end at 0.105), and a market-risk premium of 6%. NECG calculated the recommended WACC using the Monkhouse equation for equity beta calculation, although they stated that they believed the appropriate formula to be the international formula (without dividend imputation). Our WACC estimate is calculated using the international formula.

Alcoa bases this recommendation to revise the proposed WACC rate on the following factors:

#### 1. Market Risk Premium

NECG states that:-

- "the generally accepted range [of MRP] among corporate finance professionals in Australia is 6 – 8%"; and
- "the most recent data suggests that MRP has been increasing over the past year in *ex post* terms".

Our consultants advise in fact that the range of most Regulatory determinations over the last 3 years has refined the range to 5-7%<sup>1</sup> with most decisions such as the QCA determination on Queensland Rail (QR) coal access settling on 6%<sup>2</sup>.

Our consultants do not agree with NECG's logic in calculating MRP. NECG conclude:

- that a generally accepted range among corporate finance professionals is 6 – 8% when the generally accepted regulated rate is 5 – 7%;
- that MRP is rising when other Regulators say it is falling; and
- that any asymmetric consequences of regulatory intervention favour a rate that is tilted to overestimating the MRP. This is presumably on the basis of risk, but as we point out the regulated rail infrastructure monopoly is not, as suggested by the risk assumptions in the NECG analysis, a risky business. Tonnes carried and tonne kilometres for paying goods (refer Chart 2 - Tonnes Carried and Tonne Kilometres for Paying Goods)<sup>3</sup> reflect a stable and growing business.

Our consultants also consider the logic for the benchmark of 7% to be somewhat flawed. They advise that:

- NECG uses a US benchmark and apply it to a domestic model recommending that this not be adjusted for taxation reasons but adjust the premium to the benchmark for taxation reasons to higher than mid point;
- The benchmark is based on a 3% and not a 2% range at 5 – 8%;
- Estimate the premium based on the size of firms in the total Australian market compared to the US, at 1.75 – 3.5%;
- This provides a range of 6.75 – 11.5%;
- Conclude a very subjective benchmark of 7% (including taxation effects).

Our consultants are of the view that NECG is erring on the high side when other regulators have taken the view that this is not desirable. Accordingly, we would submit that regulatory precedents should be followed in this case as NECG have not proven a compelling argument to change.

## 2. Capital Structure

We have no objection to the 50/50 benchmark range. However, if WNR seeks to go above this level then this may require a separate response. Resource customers have grown the railway and continue to be a source of increasing revenue in the freight market. In most cases this will be on existing lines requiring minimal upgrading with correspondingly less risk and limited debt raising in the case of spur additions to the network. Please refer Chart 3 – Train Kilometres Run and Chart 4 – Route Kilometres (Including Closed Lines).

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<sup>1</sup> Queensland Competition Authority (2000), *Electricity Distribution: Draft Determination*, Chapter 6, Table 6.4, p. 79.

<sup>2</sup> Queensland Competition Authority (1999), Final Decision on QR's 1999 Draft Undertaking.

<sup>3</sup> Westrail (2000), *Annual Report*, p. 23

### 3. Cost of Debt

The debt risk premium of 111 basis points is consistent with QR determination.<sup>4</sup> The debt issuance cost of 0.125% is in line with the GasNet decision which is a far riskier business and is the type of business where future augmentation must be built into the system earlier. Once again NECG errs on the high side for no sound reason.

### 4. Systematic Risk, Leverage and the cost of Equity Capital

Whilst NECG argues Australian entities operate in integrated markets, we are of the view that ORAR should take account of the type of monopoly enjoyed by WNR and the fact that it has a lower risk position in the integrated market.

Whilst the asset betas are estimated as bulk 0.40, intermodal 0.55, passenger 0.45 and grains 0.45 this is weighted by revenue. However, we would point out that of the NTK's run in 1999 bulk was 59 %, grain was 37 % and others 4 %. The interstate modal task is captive to rail as is the bulk minerals business and a significant percentage of the grains business. The grains and bulk business are also majority export businesses.

Because of the diversified risks of the system (as considered also below in asymmetrical risk) with regard to floor and ceiling prices, Alcoa is of the view that the lower asset beta of 0.40 should be adopted for the WACC calculation.

When equity beta is calculated using an asset beta value of 0.4, which we consider to be a more realistic estimate, the equity beta is estimated to be 0.68.

### 5. Asymmetric Risk

NECG proposes three asymmetric risks be taken into account (which mainly affect grains lines). We would comment as follows;

- WNR does not, in effect, have stranded assets as WNR lease the network and can hand back redundant sections of the network to the owner (WAGRC).
- Factoring 100% risk across the network because of asymmetrical risk mainly for grain lines is over estimating the risk as grains only account for some 37% of the NTK's.
- The South West main line is most likely the only section of line where the ceiling price will be reached and overpayments made.
- WNR has sought revenue guarantees or customer funding for any major expansion to the network in recent times.
- Rail assets are always going to have a few customers (operators and their customers). If operators decrease this does not necessarily mean the tonnage decreases. On the other hand, bulk haulage which is growing, has no road alternative and is committed to using rail by agreement with the State Government.

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<sup>4</sup> Queensland Competition Authority (1999), *Final Decision on QR's 1999 Draft Undertaking*.

- The ceiling price is not the break-even price, again this perceived risk may apply to certain markets (eg the grains market) but it is not a 100% risk across all businesses.

## OTHER COMMENTS

### Application of WACC

The specific relationship of the overall capital replacement model ignores specific line and economic impacts by averaging the total WACC to all business sectors (agriculture demand volatility and low line usage compared to high volume minerals business).

Acknowledging that the Access Code does not provide for separating the line in question from the total business for the purposes of determining the WACC rate, we would like this restriction to be reviewed in future to avoid unintended indirect cross-subsidisation because:

- It is possible to identify and substantiate the risk differences between the businesses;
- the businesses can be separated; and
- construction of significant new assets enables the identification of project risk and a separate return.

Accordingly our submission is that the Regulator should consider applying the WACC to sections of line or alternatively to types of business. The market approach WACC overestimates the WACC which impacts the minerals business. Although NECG talks about revenue shortfall on a dedicated line affecting beta and asymmetrical risk the sections of line Alcoa uses are not dedicated lines and in fact most of the minerals traffic is not on dedicated lines. Therefore we are of the view if the Regulator is not prepared to consider WACC by section of line or business then the market approach to MRP, beta and asymmetrical risk be tempered by the fact that tonnages are static and the business is less risky than the market.

In conclusion, we request that the Regulator review the proposed WACC rate and set a more competitive rate based on the foregoing comments. If required, we are available to provide further explanation of our submission.

Yours faithfully

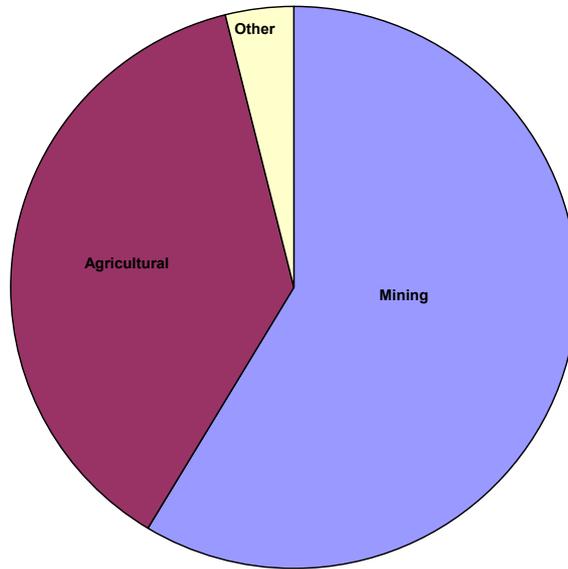
John Oliver  
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### References

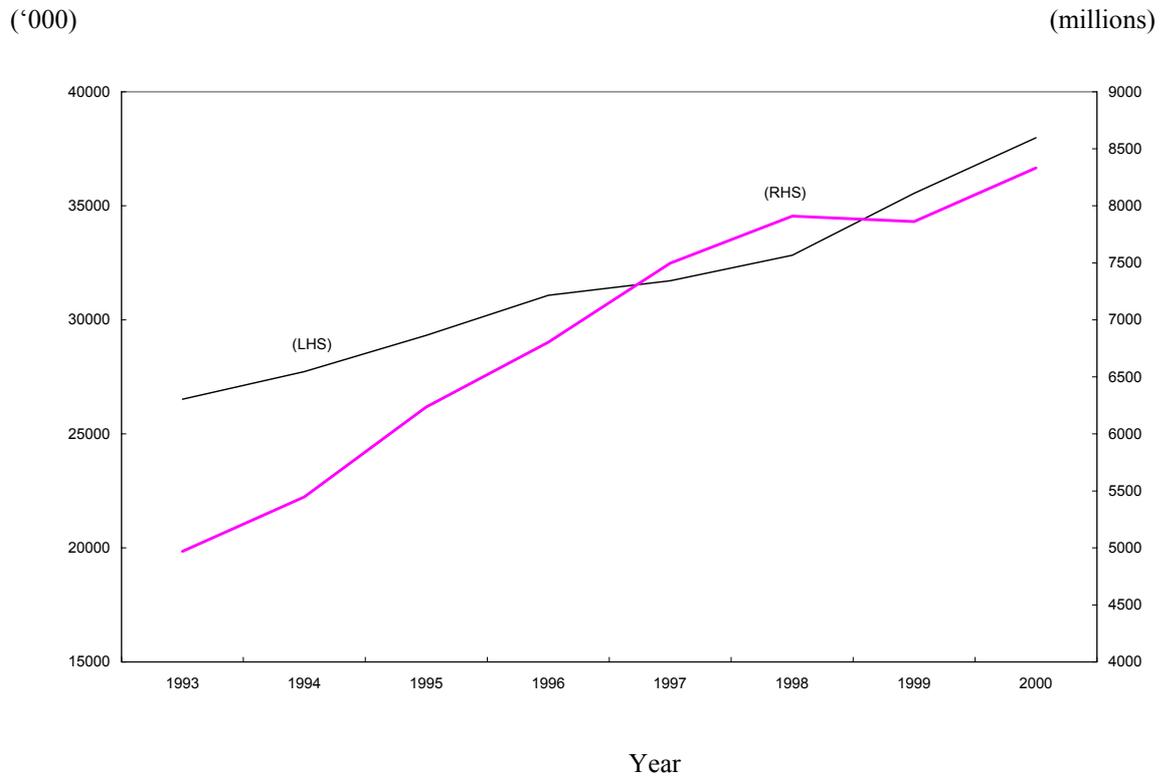
- Queensland Competition Authority (2000), *Electricity Distribution: Draft Determination*, Chapter 6, Table 6.4, p. 79.  
Queensland Competition Authority (1999), Final Decision on QR's 1999 Draft Undertaking.

**Attachment 1**

**Chart 1 Million Net Tonne Kilometres by Sector, Year to 30 June 1999<sup>5</sup>**



**Chart 2 Tonnes Carried (LHS) and Tonne Kilometres for Paying Goods (RHS)<sup>6</sup>**

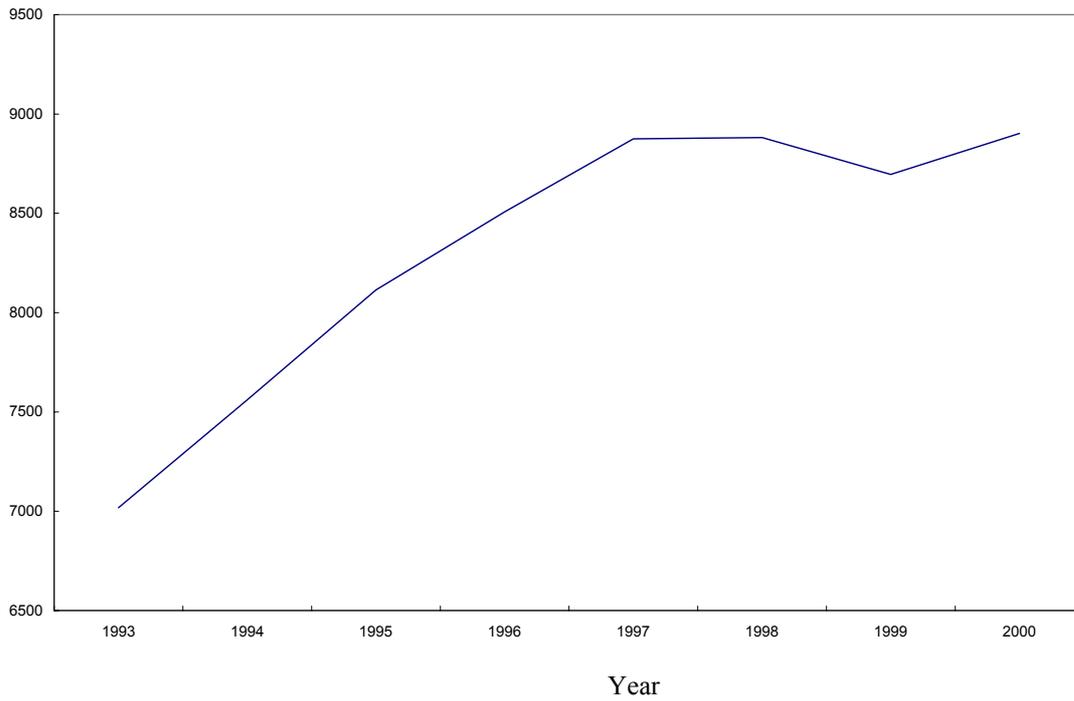


<sup>5</sup> Westrail Freight (2000), *Information Brochure*, May, p. 5.

<sup>6</sup> Westrail (2000), *Annual Report*, p. 23

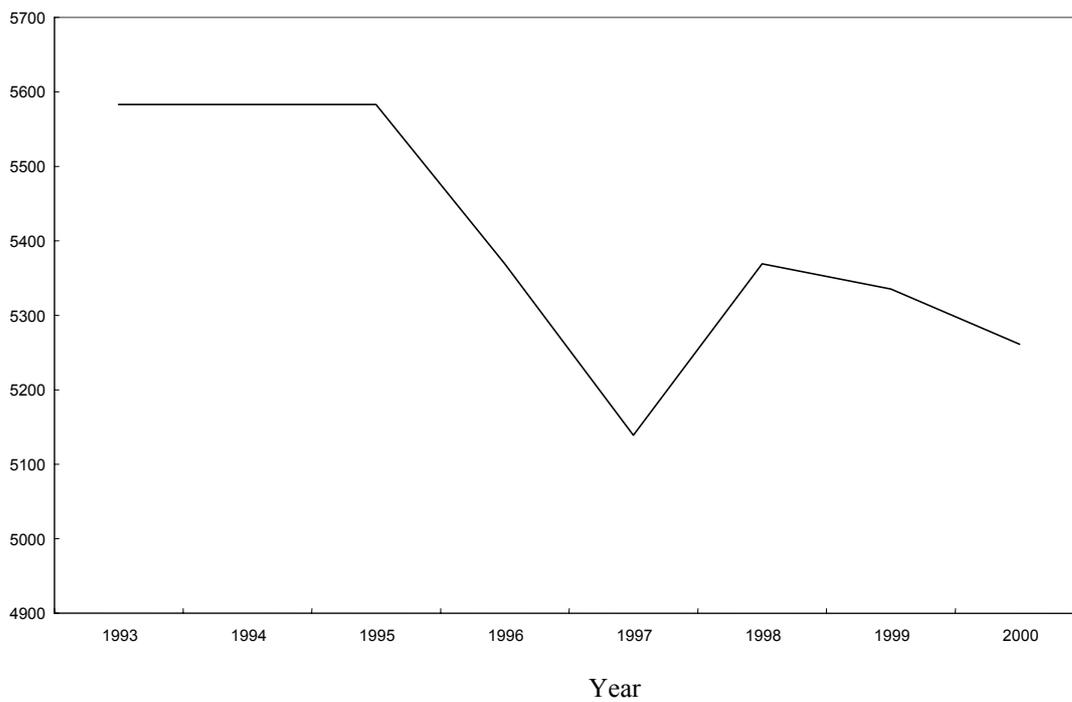
**Chart 3 Train Kilometres Run ('000)<sup>7</sup>**

('000)



**Chart 4 Route Kilometres (Inc. Closed Lines)<sup>8</sup>**

(K)



<sup>7</sup> Westrail (2000), *Annual Report*, p. 23

<sup>8</sup> Westrail (2000), *Annual Report*, p. 23