Public Submission by Alcoa World Alumina Australia on the Costing Principles as submitted by WestNet Rail

Prepared for:

Rail Access Regulator
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1. INTRODUCTION

This paper is submitted by Alcoa World Alumina Australia (Alcoa) in response to the call for public submissions by the Rail Access Regulator (Regulator) with respect to the Costing Principles submitted by WestNet Rail (WestNet) for approval by the Regulator under Part 5 Section 46 of the Railways (Access) Code 2000 (the Code).

Alcoa's approach

This submission concentrates on issues surrounding the Costing Principles as they apply to Alcoa's haulage task on the South West mainline between Kwinana and Bunbury[1] however most of the comments are equally applicable to any of the lines in the freight network.

Rather than provide a clause by clause response to the Costing Principles as submitted by WestNet, Alcoa considers that it is more important to consider the fundamental role of the Costing Principles in meeting the requirements of the Code. We believe that these principles are designed to give the operators and users of the railway network protection from the monopoly position enjoyed by WestNet as the lessee of the rail infrastructure and therefore must clearly address the intent of the Code to provide a transparent process to the derivation of the costing for any route on the network.

To this end, we have identified five major issues where, in our view, the Costing Principles depart from the intent of the Code. These are:

- An understanding of the theoretical nature of the modelling of capital and operating costs in Schedule 4 of the Code;
- The definition of what is a Modern Equivalent Asset (MEA) and hence the calculation of an appropriate Gross Replacement Value (GRV) for each route;
- An appropriate definition of the maintenance task which should be associated with the theoretical model of a Modern Equivalent;
- Recognition of the need to use efficient cost, not actual cost in the calculations; and

[1] Appendix A contains an overview of the Alcoa task for those readers who are not familiar with our mining and refinery operations in Western Australia

- The treatment of the below rail portion of pre-existing Westrail transferred contracts in the calculation of revenues from different sources (ie contracts inside and outside the Code).

This last point may be viewed as being outside of the scope of the Costing Principles however it needs to be reviewed either under the Costing Principles or the Segregation Arrangements and it is our view that it best reviewed here because of the impact on prices for access seekers operating under the Code.

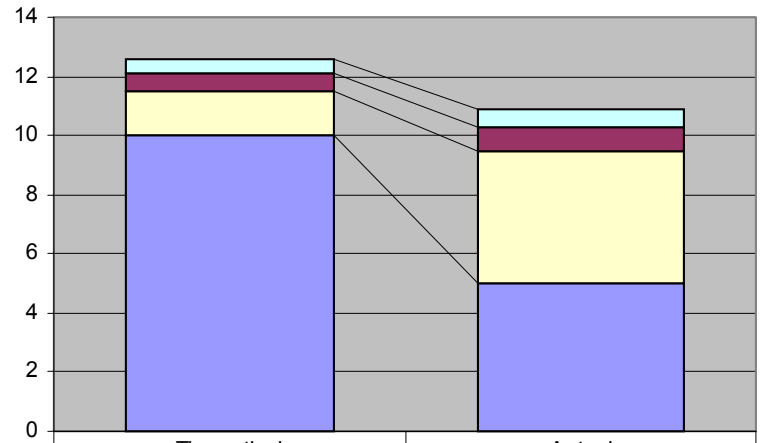
The following five sections of this submission discuss each of these points in detail.

2. THE THEORETICAL MODEL V ACTUAL ASSET CONFIGURATION

Schedule 4 of the Code clearly requires the calculation of the floor and ceiling prices to be based on a theoretical asset model. This is one that is new, replacing the existing depreciated asset and which provides the capacity to meet the current and reasonably projected demand with a level of performance as required by the users of each route. This is the definition of the Modern Equivalent Asset (MEA) as applied in the Code.

This MEA, once defined, must be provided at an efficient, current cost as defined in Schedule 4 Clause 4 of the Code. The resulting total cost (capital, operating and overhead costs combined) will then provide the railway owner with sufficient revenue which can be applied to maintain, renew and augment (if necessary) the existing asset base.

The theoretical model will result in a much different allocation of the types of cost derived from the model compared with the required spend on the existing assets because of the inclusion of capital projects in the calculation. There is no correlation between the individual cost allocations in the theoretical model and the actual expenditure on capital projects, maintenance and operating requirements. This is best illustrated by the following graph:



	Theoretical	Actual
Overheads	0.5	0.6
Operating	0.6	0.8
Maintenance	1.5	4.5
Capital	10	5

In this example, the high capital component in the theoretical model is halved in the actual model but the corresponding maintenance cost increases by 300% due to the age and condition of the asset.

The Costing Principles do not reflect the theoretical model in that whilst there is adoption of the capital principles in relation to a new asset, WestNet is requiring maintenance cost to be based on a three yearly review of actual cost. We understand this may be a causal effect of the definition of maintenance costs in the Code requiring "cyclical maintenance costs being evenly spread over the maintenance cycle."[2] Whilst the aspect of maintenance cost is discussed in more detail in Section 4, the important issue is total cost. There are no mechanisms in the Costing Principles to adjust the capital cost if maintenance cost is increased (for whatever reason) above the theoretical value and thus total cost would increase.

For instance, in addition to routine and preventative maintenance, if major periodic maintenance was undertaken on a particular route in the first three years, then the review would either have to reduce the actual cost of maintenance or eliminate the depreciation component of the capital cost in order to reflect the theoretical cost.

The ultimate aim of this regulatory process is to ensure that the following basic premise is achieved:

> *End users should be able to obtain access at the lowest possible rate whilst the railway owner must receive sufficient income to be able to maintain the existing assets in an acceptable condition and augment the network as required.*

We interpret the intention to be that the leased assets will always be available for the benefit of new and existing users at a competitive access charge, the lessee will achieve a reasonable return on its investment whilst not being allowed to reap monopoly profits from the venture and at the end of the lease, the assets will be returned to government in a satisfactory or enhanced condition.

Alcoa considers that this concept is not portrayed in the Costing Principles as submitted. There appears to be a blurring of the lines between these two models in the Costing Principles. Actual costs are being applied in some instances and

[2] Schedule 4 Clause 1 of the Code.

theoretical costs are used in others. This results in a higher total cost than was intended.

If this approach was taken to the extreme in the example above and the maximum figure from either case were used, the revenues would be 26% above the theoretical model and 46% above the actual cost model and would result in monopoly profits.

3. MODERN EQUIVALENT ASSET

In the costing principles, WestNet is proposing the current asset configuration as its Modern Equivalent Assets (MEA). WestNet's view that the current network configuration reflects MEA appears to be contradictory to other statements by WestNet. Alcoa's experience to date would suggest that the current asset configuration is not optimised and this is best illustrated by the following examples:

> Example 3.1
> Substantial sections of the South West mainline from Mundijong Junction to Pinjarra were upgraded within the last 2 years. The owner at the time (Westrail) decided to replace only the rail keeping existing reuseable timber sleepers in place and replace only substandard sleepers with new timber sleepers. As a result, WestNet now has additional resources dedicated to inspecting, maintaining and replacing timber sleepers and fastenings on this same section of track. An efficient whole-of-life cost approach to this track renewal would have ensured that concrete sleepers would have been used with an immediate reduction in inspection and maintenance costs. The use of concrete sleepers would certainly be justified as an MEA for the existing traffic.

> Example 3.2
> Train control for the South West mainline is split between two separate control centres - one at Westrail Centre and a separate control room at Picton, near Bunbury which controls the southern leg of the network. Any MEA replacement of the network would centralise the control to one train control centre with a resulting reduction in resources and equipment.

The proposition that "The Costing Principles therefore adopt the actual infrastructure configuration which comprises the Network…"[3] is not supported by any robust definition, approach methodology or validation.

The configuration of the network should be optimised to meet the *"actual and reasonably projected demand"*[4] on any one route. This would require the Costing Principles to adopt the most efficient configuration consistent with the requirements of all the users on that route. This approach would take into account the potential savings in maintenance and inspection costs and improved asset life resulting from a whole-of-life costing analysis to the replacement of assets.

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[3] WestNet Costing Principles Nov 2001 Section 2.3 Para 2

[4] Code Schedule 4 Clause 2 (4) (c) (i)

In November 2001, Alcoa commissioned a consultant's report[5] to examine the likely range of gross replacement values which would be associated with each section of line used by Alcoa. The following definition of MEA was used in that report.

- Utilising the existing land corridor, existing earthworks and embankments but with minor improvements where economically justified;
- Replacing all bridges with modern steel or concrete prefabricated units;
- Replacing all culverts with concrete pipes or boxes;
- Replacing all rail with 50 kg/m welded track on concrete sleepers;
- Standarising on 1 in 12 tangential turnouts using 50 kg/m rail and concrete bearers;
- A signalling system based on computer based interlockings, Electrocode sections and LED signals;
- A communications backbone based on fibre-optic cabling; and
- One (1) centralised train control centre with resources and facilities to be shared with the rest of the network.

In our view, the above definition best reflects the approach required in that it would match or exceed the existing track performance whilst reducing the maintenance and operating costs due to the upgrading of track and signalling systems to modern equivalents.

It should be noted that no attempt was made to further optimise the configuration in terms of the number or position of crossing loops, the track gauge to be used (narrow v standard gauge), the axle loads, or increased speeds for freight traffic as these would have required a much more extensive research project.

A complete review of this particular line would probably result in a MEA with higher axle loads and standard gauge track which would optimise both the below rail and above rail costs for bulk haul users such as Alcoa. We consider that this approach is excessive and beyond current and projected requirements. Alcoa, and other users on the South West mainline, are currently committed to narrow gauge rollingstock with 20.5 tonne axle loads

[5] Kwinana to Bunbury Inner Harbour Railway Infrastructure - Gross Replacement Value & Maintenance Calculations, Longrun Transport Developments Report November 2001

Alcoa does not accept the WestNet proposition that the current network configuration reflects MEA and we consider that a tighter or more robust definition of MEA, as shown in the example above, is required.

4. GROSS REPLACEMENT VALUE & OPERATING COSTS

Alcoa commissioned Indec Consulting to prepare a paper on the interpretation of the GRV cost model as proposed in the Code. This paper, which is attached as Appendix B provides an overview of the various cost models used in other jurisdictions and the possible approaches which could be expected in the Western Australian regime. We believe that the "Approach 1" suggested by Indec in their discussion paper appears to be the best fit with our understanding of Schedule 4 in the Code. Our analysis of the Costing Principles suggests that WestNet has adopted a different interpretation.

In our view, the Gross Replacement Value and the Operating Costs should reflect the definition of MEA. GRV should be based on building a new asset in place of the existing asset and the maintenance costs should include only those items required to maintain the MEA (ie to provide routine and preventative maintenance of the new asset). Maintenance costs should not include any capital renewal projects or major periodic maintenance (as proposed by WestNet in the Costing Principles). The principles of the theoretical model are that both these items are to be eliminated by using an annuity approach based on GRV rather than a DORC[6] approach with a return on capital based on a declining asset value as used in other jurisdictions. Other operating costs (eg Train Control) should also reflect the efficiencies resulting from the MEA installations.

GRV and Cyclical Maintenance Costs (CMC) are the essence of the costing model of the Code. The implication being that GRV addresses the infrastructure capital cost issues associated with augmentation and renewals by using MEA and incorporating both capital and depreciation components in the form of an annuity. The maintenance costs are then to be calculated "on the basis of cyclical maintenance costs being evenly spread over the maintenance cycle, being costs that would be incurred were the infrastructure replaced using modern equivalent assets."[7]

Sections 4.1 and 4.2 of this submission consider the principle issues of GRV and CMC in greater detail. However, with regard to cost determination, the Costing Principles propose to calculate the capital cost using actual unit cost rates "to calculate the capital cost of railway infrastructure as required by the Code."[8]

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[6] Depreciated Optimised Replacement Cost

[7] Code, Schedule 4, Clause 1 Operating Costs (b).

[8] WestNet Costing Principles Section 2.3 subheading Unit Rates

We would point out that with such a proposal, there is no verification of this cost component as:

- The unit rates proposed have not been provided by WestNet;
- The quantum of the spend is not verified against an existing asset management plan and data base (or alternatively subject to independent review); *and*
- There has been no benchmarking of the unit rates to verify the costs or to check that any economies of scale associated with the replacement of the whole asset have been incorporated into the rates.

Alcoa considers that using existing unit rates for track renewal and maintenance as proposed in the Costing Principles does not provide the correct result for either a GRV calculation or the resulting maintenance and operating costs.

The following sections provide a more detailed response to each of these issues.

4.1. Gross Replacement Value

To ensure consistency of definition of GRV, the Costing Principles should more precisely define the basis for the GRV in accordance with a MEA definitional approach as detailed in Section 3 of this submission. This would assume that:

- Land is excluded as a perpetual asset and previous earthworks to establish the corridor, gradients and curves are considered part of that perpetual asset. Earthworks to restore the formation and the base capping layer to acceptable specifications prior to laying a new track structure would be included as a GRV cost.
- Laying of the track would be based on using modern track laying machinery capable of laying track at a rate of 2 km per day;
- All mainline track would be 50 kg/m welded rail with concrete sleepers;
- Purchasing of all materials would be based on bulk quantities required for a minimum 100 km of track.

Our consultants have prepared an estimate of cost using this approach which includes all earthworks, the supply and installation of all track components,

signalling and communications, bridges and culverts. This cost estimate is significantly below estimates of GRV based on the Costing Principles.

Alcoa has provided a full copy of the consultant's report[9] explaining the basis for the average cost per kilometre estimate used in this comparison.

It is our view that the Regulator will need to verify the basis of WestNet's valuation methodology for the calculation of GRV.

4.2. Maintenance Costs

The maintenance costs which should be associated with the GRV should reflect the different configuration and life of the new MEA, not the existing asset. WestNet, in its Costing Principles state that "The maintenance costs reflect the MEA of new assets and GRV costs……. These amounts have been divided by individual economic lives to determine an annual maintenance cost, which reflects the cost evenly spread over the maintenance cycle. Unit rates based on WestNet's outsourced maintenance contracts and WestNet's in-house signalling and communications costs have been applied."[10]

The Costing Principles as quoted above, whilst stating new assets, does not define what type of maintenance is required for new assets. This approach appears to mix the costs associated with maintaining the current depreciated assets with the requirement in the Code to maintain the new asset. The composition of the unit rates of the current maintenance contracts is not defined however from the information provided on economic lives, the CMC calculation would appear to be based on a depreciating asset. Alcoa has been advised by its consultants that this approach has the potential to grossly overstate the maintenance costs required to maintain the "theoretical asset" as defined by the Code.

Our consultants advise that the maintenance task required to support the MEA should be based on providing all the routine and preventative maintenance, inspections of the track and other infrastructure to maintain the required standard

[9] Kwinana to Bunbury Inner Harbour Railway Infrastructure - Gross Replacement Value & Maintenance Calculations, Consultant's Report, November 2001

[10] WestNet Costing Principles Section 3.4

and provide adequate safety monitoring for daily passenger and freight services. It should also include:

- resurfacing including tamping, ballast regulating and consolidation every three years;
- replacement of worn rail at a rate of 2% every five years;
- rail grinding to maintain the rail profile every five years;
- ballast cleaning every 20 years; and
- other requirements such as weed control, pavement renewal, drain cleaning etc.

The consultants have excluded major periodic maintenance as this is incorporated in the GRV approach to capital costs.

WestNet have also proposed that "the total cost will be reset every three years based on the actual unit costs at that time."[11] We understand that the CMC cannot be reviewed independently of the capital that is required to deliver an MEA. Therefore, any reset should be on the basis on a material change as defined by the Regulator and should look at both capital and maintenance components in relation to the model. Any cost reset should be examined by an independent party (for example - the Regulator) and released for public comment.

Any defined reset period for GRV (for example the 3 year reset proposed by WestNet) will also have an effect on the maintenance costs to be associated with the GRV. If the GRV is to be reset every three years, then the maintenance costs used should also be reset every three years and only reflect the cost of maintenance in years 1 to 3 of a new MEA. If the WestNet proposal of three years was adopted then some of the maintenance items mentioned above would need to be excluded (eg ballast cleaning at 20 years and rail grinding every 5 years).

4.3. Other operating costs

The consultants report on GRV recommended only one train control centre was required to control the whole of the south west network and that it should be co-

[11] WestNet Costing Principles Section 5.1 Ceiling Variation Paragraph 2

located in Perth with the other train control system associated with the Kalgoorlie to Perth mainline. This would provide additional equipment redundancy and reduced personnel requirements. This approach has been used in our modelling of the route ceiling prices resulting in only six train controllers required for the South West mainline.

5. DETERMINATION OF COSTS

The Regulator has the power to determine costs under either Schedule 4, clause 9 or clause 10 and also to review and redetermine costs (Schedule 4, clause 12) if there has been a material change in circumstances.

The Code refers to excess payments being within a limit and such limit "being a percentage of the **relevant costs** from time to time notified in writing to the railway owner by the Regulator"[12], and also refers to there "being no excess payments after three years of access commencement by an operator or group of operators"[13].

Interpretation of the Schedule 4 clauses and subclauses referred to above is taken to be:

- The owner will make an initial determination of the costs based on the Costing Principles approved by the Regulator and provide details to the Regulator.
- The Regulator advises the owner if the Regulator proposes to make a cost determination in the case of an access application.
- If so, the Regulator is to consider both the owner's submission and any other submissions.
- The Regulator is to notify the owner of the costs determined.

The implication of the determination being that the costs would be efficient costs as per Schedule 4, clause 4 of the Code.

Interpretation of Section 47 of the Code is taken to be that the "relevant costs" are the costs determined under Schedule 4 Clause 9 or Clause 10 and that whilst there can be short term overpayments (within a defined limit) there must be no overpayments at the end of three years.

Overpayment could be interpreted as both relating to the appropriate share of the 'relevant cost' or the fact that actual cost is below 'relevant cost'. However, the Code does not mention underpayment which would negate the latter interpretation. This would also imply that the access pricing defined in Schedule 4 is a revenue cap (although individual

[12] The Code Section 47 Overpayment Rules clause (2) (a)
[13] The Code Section 47 Overpayment Rules clause (2) (b)

operators may have different access prices - for example where WestNet bears any lower volume risk or where rates may be price adjusted due to changes in material circumstances).

The Code does not state that there is to be total cost reset every three years based on actual unit costs at that time as is proposed by WestNet under Section 5.1 of the Costing Principles.

Alcoa does not accept the interpretation used in the Costing Principles with regard to the determination of costs under the Code.

Costs must be efficient (reflecting the adequacy and prudency of the spend) and the mechanisms for determining access costs must be fair and reasonable. Alcoa considers that the following issues are not correctly addressed in the Costing Principles as submitted:

- the issue of WestNet's actual costs and if these are efficient;
- the suggestion that ceiling prices should be adjusted for inflation;
- the maintenance cost calculation [as discussed in Section 4 of this submission].
- separation of accounts and costs between entities and within entities;
- the apportionment of below rail costs on transferred Westrail contracts and the allocation of these costs to particular routes [refer to Section 6 of this submission];
- benchmarking of efficient cost; *and*
- income from other sources.

With regard to the adequacy and prudency of a railway owner's costs and allocative principles of corporate and other costs, these issues have been addressed by regulators[14] in the energy sector by the use of benchmark costs, stand-alone cost models and asset

14 Independent Pricing and Regulatory Tribunal (IPART), AGL Gas Networks, Access Undertaking (as varied) Determination, July 1997; Office of the Regulator General, Victoria, Electricity Distribution Price Determination 2001-2005, Volume 1 Statement of Purpose and Reasons; Australian Competition and Consumer Commission, Decision, Queensland Transmission Network Revenue Cap 2002-2006/7, 1 November 2001; Queensland Competition Authority (QCA), Final Determination, Regulation of Electricity Distribution, May 2001; QCA, Final Decision, Proposed Access Arrangements for Gas Distribution Networks; Allgas Energy Limited and Envestra Limited, October 2001; IPART Pricing for Electricity Networks and Retail Supply, Report, Volume 1, June 1999; IPART Final Decision Access Arrangement for AGL Gas Networks Natural Gas Systems in NSW, July 2000.

management reviews. Some aspects of these determinations have been incorporated into the following comments regarding the above issues.

5.1. WestNet's Recalculation Period

The Code provides a theoretical cost model for payment of a revenue by access users under the Code which is reviewed every three (3) years. There is anticipated to be both a revenue adjustment as users enter and exit over the period and an end of period reconciliation of access payments made based on total 'relevant costs'[15].

The principle of the Code is based on access cost being determined by the theoretical model incorporating capital, operating costs and maintenance costs and a direct allocations of actual overhead cost.

Our interpretation is that the "relevant costs" referred to in Section 47 of the Code are the costs which have been advised by the Regulator to the owner either initially (under Schedule 4 clause 9 or 10) or from time to time if circumstances have changed materially (Schedule 4 clause 12).

There is evidencial support for WestNet's view that these costs should be reset every three years just because overpayments are reviewed at that point in time. The theoretical model is based on the principle of incorporation of capital cost which is a long term view.

WestNet is proposing on one hand that major periodic maintenance be included in the maintenance cost component (which is not in accordance with the theoretical model as the track is at all times new with renewals and major periodic maintenance factored into the capital component) and on the other, requiring three yearly recalculations of the ceiling. Either the major periodic maintenance (MPM) is not included in the maintenance costs, in which case recalculations would not be required in the short term (as MPM would not occur for sometime) or MPM is included in the maintenance cost in which case the recalculation would be required in the short term to adjust the capital component so that the total cost was not above the theoretical model total cost. We would therefore propose that the Regulator consider how and when the recalculation is to be conducted, what items are to be included, how actual operations and maintenance costs are to be benchmarked for

[15] The Code Section 47 Over-payment rules clause (2) (a)

efficiency and actual capital costs are reviewed with regard to asset management prudency and finally how actual costs will be measured against theoretical costs over the longer term as discussed in Section 2 of this paper.

5.2. CPI Adjustment

The Costing Principles propose to vary the regulatory ceiling by movement in the CPI[16] on an annual basis and also at the end of each three years the regulatory ceiling be re-calculated, "based on actual unit costs at that time." The assumption being that the actual costs are both relevant and efficient costs.

It is Alcoa's view that CPI adjustments should not be applied separately as proposed by WestNet as the WACC incorporates inflation as one factor in the calculation. Since the other components of the total cost are based on theoretical costs and not actual costs, it would seem unlikely that CPI adjustments are justified and a reset resulting from a pricing review by the Regulator is a more applicable measure of cost movements.

5.3. Maintenance Costs

WestNet is stating that, as a major cost component, track maintenance is outsourced and market tested and as a consequence these costs are efficient. However, they do not explain the relevance of the current track maintenance to the requirement in the Code that it should reflect the costs of an MEA. As has been noted in other jurisdictions[17] with regard to market testing of costs, there needs to be justification of the quantum of the cost. WestNet also does not provide any benchmark support for its direct internal costs (eg signalling).

It is Alcoa's view that the Costing Principles as prepared do not provide any justification as to the adequacy or prudency of the actual cost, how this is linked to efficient practices or whether this is a relevant cost in relation to the definitions in the Code.

16 WestNet Costing Principles Section 5.1 Ceiling Variation Paragraph 1
17 QCA and IPART.

5.4. Cost Allocation and Actual Costs

The allocative process for distribution of cost encompasses all the issues of the appropriateness of allocation of costs that regulators in many jurisdictions have enunciated and are now determining by benchmarking or cost models.

The cost allocation issue is partially addressed in the Code by adopting a theoretical cost model for capital and operating expenditure. However, whilst the functions of operational cost are delineated in the Code, the efficiency aspects with regard to the quantum of operations cost and the overheads attributable for access related functions are not. Also, overheads are allocated on a discretionary basis.

Similarly, the adequacy and prudency of the actual costs with regard to optimisation of a network on a whole of life cost basis in, for example, utility regulation has involved a review of the asset management processes of the network. This has also included asset management audits to ensure the network is neither deteriorating nor being "gold plated", generally with reference to operational standards.

With regard to floor and ceiling costs and the requirement of efficient costs, it would appear to be in all parties' best interests that these be determined by the Regulator. Such determinations should have regard to regulatory determinations in the infrastructure utilities industries (water, electricity and gas), where there is a longer regulatory history in these matters.

Typical utility regulatory approaches in considering the efficiency of actual costs benchmark the equivalent of direct unit costs (for instance, per kilometre or per GTK) and conduct asset management reviews to consider the prudency of the direct capital operations and maintenance costs. Indirect or overhead costs are also able to be benchmarked from recent regulatory decisions in the other industries.

WestNet's actual costs would appear to come into access pricing consideration under the Code and the Costing Principles in only three instances:

- actual allocated overhead costs in determining initial floor and ceiling prices;
- similar costs whereby the Regulator determines costs in a non-floor or non-ceiling situation; *and*
- total costs (capital and non-capital) at the end of three years.

We would therefore propose that the Regulator consider that where WestNet's actual costs are included in determinations they be benchmarked for both applicability and efficiency.

5.5. Separation of Accounts and Costs

The ring fencing of costs within the Australian Railroad Group Limited (ARG) is similar in principle to ring fencing of distribution and retail costs in the regulated energy sector and ring fencing for rail access in other jurisdictions. Regulatory responses for electricity distribution range from the issuance of cost templates in the case of the Victorian jurisdiction to the concept of separate or 'stand-alone' companies in the NSW jurisdiction.

With regard to ring-fencing, treatment of costs, efficiency of costs and internal and external access pricing, the Queensland Competition Authority (QCA) in Queensland Rail (QR) Determination has proposed the QCA oversee the selection of an auditor, the matters the auditor addresses and that the primary obligation of the auditor be to the QCA.

The issue of apportionment of costs by a fair and reasonable manner in our view requires both issuance of guidelines and audits on a regular basis. This aspect is considered in more detail regarding benchmarking of actual costs in the next section.

It is Alcoa's view that, as a minimum, the Regulator should seek independent audits and issue guidelines regarding the separation of accounts and costs. These aspects are also covered in more detail in our submission on Segregation Arrangements.

5.6. Efficient Costs

The WestNet Costing Principles are based on including all of WestNet's costs (as it is a totally dedicated access provider to the rail network) and a proportion of ARG costs related to the functions of accounting, financial support, safety and accreditation issues, human resources and IT services. The ARG corporate and other function costs are to be allocated based on the usage (of these functions) by WestNet as a proportion of all other users in the ARG group.

Schedule 4, clause 4 of the Code states that all costs should be efficient costs and this should therefore apply not only to overhead and corporate costs but to directly attributable costs.

The two main streams of analysis to assess productive efficiency, identify gaps and establish benchmarks of best practice are *economic modelling techniques* and *financial cost models*.

Economic modelling techniques, are at a high level and include total factor productivity, econometric cost models, and a selection of partial indicators of performance including unit cost benchmarks.

The approach with regard to the second analytical stream is to develop a stand-alone cost model for both indirect, direct and total costs in order to support the concept of a benchmarked best practice cost (which also covers the issues of unavoidable cost and cost allocation).

The concept of a stand-alone cost has been considered by Regulators for some time in relation to segregation of functions in an integrated organisation. IPART[18] in 1997 considered both optimised stand-alone assets and stand-alone cost measures for gas access. ORG[19] adopted stand-alone benchmarks for corporate and other overhead.

Other Regulators have also adopted partial stand-alone cost concepts mainly in seeking to ascertain efficient costs in operations and overhead cost areas. The QCA in considering the QR Draft Undertaking Pricing Principles sees efficient costs as the pricing limits based on stand-alone and incremental costs and should only reflect those costs efficiently incurred. In terms of ensuring efficient costs, the QCA is proposing an efficiency and incentive regime comprising an efficient review of costs at the end of the regulatory period.

The advantage of the stand-alone approach is the ability to desegregate financial expenditures into functional categories to facilitate best practice analysis. Alternatively, a broad-based or unit cost benchmarking approach, generally used by

18 IPART, AGL Gas Networks Limited, Access Undertaking Determination, July 1997, Section 6.4 Stand-Alone Cost of Servicing the Contract Market.

19 ORG, 2001 Electricity Distribution Price Review, September 2000

regulators, incorporating some of the stand-alone concepts of desegregation of financial expenditures into appropriate functional categories can consider these issues.

The approach suggested in this submission involves developing a benchmarked stand-alone indirect cost model and combining this with a benchmarked network unit cost model.

The methodology being the efficient sizing of the direct costs by key performance indicator (KPI) requirements and/or by conventional benchmarking. Assessing the service standards and the risks involved in the primary role of operational, maintenance and organisation required to service the network and meet the performance standards. Benchmarking all indirect activities and combining this into a benchmarked total stand-alone cost model including financial analysis of cost ratios.

The stand-alone model uses a base-case level of service quality and benchmarks the indirect cost, which combined with the direct costs, meets with KPIs as applied and measured to the regulated network activities of the business.

The methodology imparts four benefits to the process, namely;

- efficiencies can be verified;
- it allows the opportunity to benchmark indirect costs;
- the use of a functions and activity categorisation of a network company can enhance and assist the regulatory regime process in benchmarking and setting efficiency targets; *and*
- it provides a more empirical method of validating the total cost based on benchmarked efficiency with a greater degree of confidence to all stakeholders.

A recent regulatory decision with regard to the definition and benchmark of corporate costs was that of the ORG 2001 Price Review for the Victorian electricity distribution businesses.

The methodology employed by the ORG consultants KPMG[20] was to benchmark such functions against a combination of cost and revenue benchmarks as the revenue was determined by the regulator against overall efficiency measures and not subject to definitional differences or managerial discretionary spending. Corporate costs were considered of a fixed nature by KMPG and would not vary greatly with the size of the business and were adopted by the ORG in its final determination.

The corporate sub-function benchmarks as adopted in the ORG decision were categorized as "Other Operating" costs and comprised finance, human resources, information technology and other which comprised environment, corporate services (general management, management services, quality, business improvement, public relations, company secretary/legal, risk management, strategy and planning and property) and miscellaneous.

In summary, Alcoa does not accept the view expressed by WestNet that "devising and implementing an appropriately transparent and simple methodology which is also cost effective is impractical"[21].

This process has been achieved in numerous jurisdictions with minimal additional cost and with sufficient transparency to satisfy both current users and new access seekers. The approach proposed will ensure that where actual costs are considered as part of the access model, then there are processes in place to ensure these are allocated fairly and are based on efficient costs.

5.7. Other income

WestNet has stated that it has "…no other function than the provision of access. Accordingly, WestNet has included all of its overhead costs"[22]. However, WestNet does provide other services apart from access - for example, it provides track maintenance and inspection services to Alcoa on its private sidings at Kwinana, Pinjarra, Wagerup and Bunbury. It is presumably also responsible for infrastructure maintenance on behalf of other rail users and AWR in terminals, depots, yards, stations and platforms, rollingstock maintenance facilities and sidings.

20 Office of the Regulator General, 2001 Price Review – Cost Allocation, 30 May 2000, KPMG.

21 WestNet Costing Principles Section 4.2 Allocation of Overhead Cost

22 WestNet Costing Principles Section 4.1 Definition of Overhead Cost Paragraph 2

Alcoa considers that there are specific revenue streams and corresponding direct and indirect costs which must be excised from the accounts of WestNet.

6. CURRENT CONTRACTS & COST APPORTIONMENT

Contracts between users and Westrail which were assigned as part of the "Westrail Freight" sale have historically not included any price split between above and below rail costs. Following the sale of Westrail Freight, these contracts have presumably been split within ARG between WestNet Rail and Australia Western Railroad (AWR). They remain outside the Code and presumably will remain so until expiry. Distorted splits of the above rail and below rail costs of these contracts could lead to understated cost recovery for below rail and hence affect rates for other users within the price ceiling determined by the Regulator.

The presumption is that within existing contracts between WestNet Rail and AWR there is potential for a distorted allocation of costs with regard to infrastructure portion of these contracts. There needs to be a process for determining the access portion of the revenue stream from the current contracts if they remain outside the Code or until such time as they come under the Code.

The allocative process for both distribution of cost by route and allocation of AWR's below rail cost encompasses all the issues of the appropriateness of allocation of costs referred to by regulators in many jurisdictions.

It is Alcoa's view that access charges for the existing AWR contracts and their allocation to routes is not covered adequately in either the Code or the Costing Principles.

The assumption is that AWR's contribution is based on full cost recovery less contributions from others except where ceiling prices apply, but this is not transparent.

Schedule 4, clause 13, subclauses (a), (b), and (d) state respectively that "there should be consistency in the application of pricing principles", where access "relates to the same market", any access cost difference should only reflect the "costs or risks associated with the provision of the access" and "any apportionment of costs for the purposes of this Schedule should be fair and reasonable".

In determining floor and ceiling prices under Schedule 4, clauses 7 and 8, the total payments from all operators, all other entities and the railway owner must not be a sum that is either less (floor) or more (ceiling) than the total cost attributable to the route.

It is unclear from the Costing Principles if the payments by AWR in relation to the current contracts is fair and reasonable. This issue is further complicated by the application of floor and ceiling prices, if the operators are in different "markets" and also if adjustments to access charges are required as operators enter or exit the market.

Unless the majority of revenues are treated similarly, namely by the revenue from the existing AWR contracts being determined by the Code's costing principles, then there is no transparent process that both the quantum and each users share is being determined on a fair and reasonable basis.

Our proposal with regard to this issue and its inter-relationship with the overpayment issue is that this may require a judgement by the Regulator that, for instance, AWR's payments to WestNet for access should be based on a combinatorial[23] ceiling rate ($ per thousand GTK) for freight users and on a trip-kilometre rate for passenger use. This would establish transparency of charging for users outside the Code, assuming that over time, these contracts would come under the Code and be subject to the full scrutiny of the Regulator.

This latter aspect could involve audits or as was the case of the Queensland Rail (QR) Draft Undertaking Determination[24], the QCA requiring QR to provide disclosure of both internal and external access agreements in a particular market (coal).

[23] A combinatorial ceiling rate ensures that if all users paid the same rate (the combinatorial rate) in $ per thousand GTK then WestNet's revenue from all users combined would equal the ceiling price for that route

[24] QCA Draft Decision on QR Undertaking 2001, Volume 2 Chapter 5 - Pricing Principles

7. OTHER ISSUES

The following issues have not been addressed in any detail in this submission. We have listed these issues here with minimal comment as we consider that all of the matters already discussed will result in a revision to the Costing Principles and therefore the following items would need to be reviewed in the light of any changes. If a more detailed submission on any of the following issues is required, Alcoa is willing to provide supplementary input into the public consultation process at any time.

7.1. Design, Construction and Project Management Fees [Section 2.3]

The percentages quoted in the Costing Principles would appear to be significantly higher than our experience and may also result in a duplication of costs in some instances.

7.2. Financing Charge during railway infrastructure construction [Section 2.3]

The application of this charge should be consistent with an efficient rate for track construction of 2 km per day and the regulated WACC rate.

7.3. The annuity calculation [Section 2.6]

Payments by operators are most likely monthly in arrears. If this is the case, the calculation of the annuity should mirror these payment terms.

7.4. Definition of Operating Costs [Section 3.2]

Maintenance costs should not include the costs of incidents where these are recoverable from either operators or insurance.

7.5. Allocation of Operating Costs [Section 3.3]

We would expect the direct supervision and checking of contractors performance to be included in the operating costs as if the services were provided in-house.

7.6. WACC Rate [Section 4.2]

The Code (Section 52) requires a review of the WACC rate as at 30 June 2001. With the introduction of the Code delayed until 1 September 2001, this WACC review has not occurred. With the reduction in rates for debt and equity financing since the 8.2% transitional rate was first set, an immediate review of WACC would seem appropriate.

In particular, the reference to an 11% WACC for "construction cashflows" [Section 2.3 *Financing charge during railway infrastructure construction*] would appear to be at odds with the intent of the Code.

7.7. Overpayment Rules [Section 5.1]

There has been no submission from WestNet on how the overpayment rules would operate in relation to the Costing Principles. Issues around the percentage limit, the three yearly "zero balance" and other procedures in relation to the Overpayment Rules would sensibly be combined and reviewed at the same time as the Costing Principles.

7.8. Calculation of Regulatory Floor [Section 5.3]

The Code implies and recognises that there will be more than one regulatory floor. WestNet should provide a set of rules for review. The suggestion that "issuing a set of rules which deals with these and other factors either individually or in combination is impractical" does not take account of the requirement to submit these rules now for approval by the Regulator and to allow public comment.

7.9. Review and Consultation [Section 6]

This needs to be on-going review to ensure that the Costing Principles remain relevant.

7.10. Economic Life Table [Section 7.1]

We have provided an alternative view on asset life in a separate consultant's report.

8. SUMMARY

We would submit that the Costing Principles proposed are not in accordance with the requirements and intent of the major elements of the Code namely:

- There is an inconsistency between the application of the theoretical pricing model in the Code and the actual costs used in the Costing Principles;
- WestNet's definition of the current network configuration as a modern equivalent asset ignores potential savings from technological advances e.g. the use of concrete sleepers and improved train control facilities;
- The use of existing contractor rates for civil works and in-house rates for signalling costs in the calculation of GRV ignores the economies of scale which could be achieved for material and labour under the theoretical model;
- Maintenance costs for a new MEA track will be much lower than the equivalent maintenance required on the existing track;
- A major requirement of the Code and all regulators is that the costs be efficient but there is inadequate support for this in the Costing Principles:
    - whilst the outsourced costs are market tested, there is no verification as to their quantum by asset management reviews or benchmarking;
    - in-house costs are not benchmarked and other overhead costs are allocated; *and*
    - price reset costs are based on unbenchmarked costs at the time.
- WestNet have suggested that regulatory ceilings should be adjusted by CPI. This ignores the basis for price change under the Code and the incorporation of an inflation component in the WACC rate;
- Allocation of costs from ARG and WestNet overhead allocation is not transparent and does not attempt to reflect any of the widely accepted allocation methodologies adopted by regulators in Australia; *and*
- There is no transparency with regard to the below rail costs of the pre-existing Westrail contracts and how they are allocated to routes which may affect the other

operators share of total cost and how other operators are charged under a full cost recovery regulatory cap.

We propose that the Regulator should exercise his powers to amend the Costing Principles to address the following concerns:

1. The access revenue from the Westrail contracts which are outside of the Code should be determined by the Code's Costing Principles and their allocation to routes be made transparent.

2. That the Costing Principles should reflect the correct application of maintenance cost for Modern Equivalent Assets and this also be correctly applied to any price reset principles and period.

3. An independent review of the unit rates and costs be undertaken. This should be used to verify the component costs of the GRV and the corresponding operating and maintenance costs as defined in the Code.

4. WestNet's actual unit rates and costs should be benchmarked for efficiency.

5. Non-access revenues and costs should be excised from the allocation of costs to the provision of access.

6. The Regulator should propose a process to verify how the actual route by route costs of maintaining the existing network compare with the revenue pricing model in the Code.

7. A set of overpayment rules should be incorporated as an attachment to the Costing Principles and released for public comment

APPENDIX A

ALCOA'S RAIL HAULAGE TASK IN WESTERN AUSTRALIA

Alcoa's Rail Haulage Task in WA

Alcoa World Alumina Australia (Alcoa) is the world's largest producer of alumina and a significant aluminium producer with mines and refineries in Western Australia and two aluminium smelters in Victoria. Operations in Australia are managed by Alcoa's corporate office at Booragoon in Perth. The company has 3700 employees in Western Australia.

Alcoa operates three refineries and two ship loading facilities in Western Australia. Refineries are located at Kwinana, Pinjarra and at Wagerup. Alcoa has two port berth operations which are exclusively for alumina/caustic ship loading/unloading operations – one at Kwinana and one at Bunbury. Three major commodities are hauled by rail to support the refining and shipping process. These are:

- bauxite from the Pinjarra stockpile site to the Kwinana Refinery;
- alumina from Pinjarra and Wagerup refineries to either Kwinana or Bunbury Ports; and
- caustic from either Kwinana or Bunbury ports to either Pinjarra or Wagerup refineries.

Bauxite is railed to Kwinana to be used as the main input into the refining process in the plant at Kwinana to produce alumina for export from the berth at Kwinana. Alumina is produced at both Pinjarra and Wagerup refineries and is railed to either Kwinana or Bunbury ports for export. Caustic Soda solution is imported for use in the refining process at all three refineries and is transported by rail in special containers to both Pinjarra and Wagerup refineries.

Under the State Agreement with the Government of Western Australia, Alcoa is obliged to haul these commodities by rail.

These commodities are hauled over 3 routes:

- Kwinana to Pinjarra via Mundijong Junction (referenced in the Code as part of route Route 7 and part of Route 9);
- Pinjarra and Wagerup to Bunbury Harbour (referenced in the Code as part of Route 9 – the South-West mainline track between Mundijong Junction and Picton); and

- Pinjarra to Alumina Junction (referenced in the Code as Route 11 – the track between Pinjarra and Alumina Junction and between Alumina Junction and Pinjarra South).

Alcoa's annual rail haulage tonnages are currently averaged at:

- 7.9 million tonnes for Bauxite;
- 5.1 million tonnes of Alumina; and
- 0.6 million tonnes of Caustic.

These tonnage represent approximately 80% of the traffic on the south west mainline which is shared with passenger trains (the Australind), other bulk haul users such as Western Power and Worsley Alumina and other bulk haul and general freight traffic.

ATTACHMENT A

INDEC CONSULTING DISCUSSION PAPER

A REVIEW OF THE REGULATORY FRAMEWORK FOR DEVELOPMENT OF COSTING PRINCIPLES FOR RAIL ACCESS IN WA