NORTH WEST IRON ORE ALLIANCE

PO Box 7505 Cloisters Square WA 6850

The Pilbara Infrastructure (TPI) Rail Part 5 Instruments submission

for the proposed

Overpayment Rules

&

Costing Principles

1 October 2008

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Executive Summary

The North West Iron Ore Alliance (Alliance) members support access to an existing railway on terms that facilitate competitive and cost effective above rail operations to enable many projects in the Pilbara region to progress through to production (refer Annexure A Emerging East Pilbara Projects). This would also have the effect of stimulating the current level of exploration and resource development in the Pilbara generally.

The Alliance strongly supports the underlying intent and the actions taken so far by the State Government and Fortescue Metals Group (FMG) to put in place an alternative rail transport corridor for iron ore in the east Pilbara that offers rail access to third parties on a timely basis with fair terms.

A contestable market for rail operations will only be facilitated if a level playing field is created for all parties, including FMG, having or seeking access to railway infrastructure. In practice, however, FMG's 100% ownership of The Pilbara Infrastructure Pty Ltd (TPI) and the highly integrated nature of their operations requires consideration by the Economic Regulatory Authority (Authority) that the railway be treated as a stand-alone business and the efficient costs are estimated from a building block approach.

Stand-alone Railway

The Alliance considers that as a vertically integrated operator the railway has been constructed not as modern equivalent assets (MEA) or represents efficient cost but rather is based on the optimisation of the FMG supply chain and structured to meet FMG financial and market obligations rather than a common user railway. This fact must be considered by the Regulator in considering the Over-payment Rules and Costing Principles elements and the Weighted Average Cost of Capital (WACC) elements together regarding the access cost of an efficient railway.

TPI, in various parts of its Costing Principles proposals and WACC comments to the Authority states that, as a new greenfields railway, this is an efficient railway and, as there are no direct comparators with regard to elements of the WACC and that the calculation of elements of the WACC are complex and result in inappropriate betas, so the ERA should accept their actual costs for:

- replacement values, unit rates of costs and design/project management fees in calculating gross replacement value (structure of the railway);
- finance charges and include in the capital cost its cost of capital and related financing fees and charges during the construction period; and,
- equity raising charges.

However, the Alliance view is that the below rail component was constructed in a manner to meet FMG financial and market contractual obligations and to optimise the FMG supply chain. This has ramifications as regards to any future upgrade and capacity expansion of the railway. The Alliance members are totally committed to pay their fair share of the cost thereof. Therefore the Alliance requests the Authority to consider the regulatory treatment of the capital bases, finance and equity costs, future depreciation and major periodic

maintenance both on the principles of the fairness to all parties and the incentive to TPI promote the Regime objectives. Accordingly the Alliance requests that the Costing Principles, Over-payment Rules and the WACC should reflect the Segregation Arrangements in that, in the regulatory sense, the railway is treated on a stand-alone basis and the efficient costs be estimated from a building block approach.

Stranding risk

The issue of stranding needs to be considered as TPI are proposing it either applies in WACC, or in the Costing Principles. The Alliance is of the view that there is minor stranding risk as there are mitigation strategies inherent in the access process, and on both the supply and demand sides, there are fundamental market forces which, by any reasonable consideration, suggest this risk is minor and there are also some timing considerations. The Authorities WACC Issues Paper dated 4 September, 2008 discusses the stranding risk and the Alliance is responding to that Paper in detail and in this submission is providing a brief summary in effect that there is minor stranding risk. The Alliance requests the Authority to refer to the Alliance submission regarding WACC dated 15 October for fuller detail.

Route Sections

The TPI approach to the definition of route sections is that there is only one section of line from Cloud Break to the port dumping facility. This approach overly aggregates costs and does not provide transparency or fairness to access seekers as it is likely that there will be many access seekers, based upon existing mining and exploration tenements, between Cloudbreak and Port Hedland.

A fairer and more transparent approach would be to define sections of the entire railway between Cloudbreak and Port Hedland by those sections of track, including multiple line track, between sidings, passing loops and terminals. In this way access charges will more fairly reflect the costs over which the access occurs.

Capital Cost of a Greenfields Railway

As stated above the Alliance considers the railway has been constructed not as MEA or represents efficient cost and is proposing that the Authority consider an amendment to the Costing Principles which encompasses the principles of a stand-alone efficient railway and is detailed in Annexure B (Proposed Amendment to the Costing Principles).

Economic life of assets

There are many factors to consider with regard to economic life of heavy haul railways and these are detailed in Annexure C (Economic Life of Assets) suffice to say in benchmark terms the TPI proposal is a shorter economic life than that determined by the Authority for WestnetRail (WestNet) but longer than that determined by the Australian Taxation Office which has implications with regard to the WACC determination.

Commercial railways are able to lease railway track just as they would plant and equipment. This is a highly relevant factor in the case of heavy haul railways and it is suggested that leasing principles be considered especially with regard to residual risk.

When considering railway infrastructure assets and in particular heavy haul infrastructure there is an industry custom and practice of Major Periodic Maintenance (MPM) which renews the asset. MPM is not repairs and maintenance it is renewal of the asset.

Major periodic maintenance (MPM) and Depreciation

The Alliance members are prepared to share the fair and reasonable cost of ensuring the railway can perform the task. Also as stated in Section 6 that the TPI railway construction under taking was a rapid development project which resulted in several diseconomies and given the difficulties of estimating the capital base (aside from stranding risk) the Alliance would suggest that the Authority consider the use of MPM in lieu of depreciation. Such an approach would ensure that the railway was at a standard (to be nominated) to meet the task, TPI have incentive to undertake MPM and the Alliance members have incentive to fund the investment. Another benefit of this approach is that it would reduce the estimation errors in estimating WACC and provide openness as to the capital works program to meet the operational standard.

Allocation of Operating and Overhead Costs

Sections 4.3 Allocation of Operating costs and Section 5.2 Allocation of Overhead cost does not provide sufficient transparency to the allocation of costs and potentially may lead to the unfair allocation of costs as the route section definition in the document covers the entire railway not just that part used by the access seeker. Consequently the Alliance request these be replaced with a proposed suggestion based on allocation rules using gross tonne kilometres (GTK) or train movements

Other Issues

Other issues commented on in this submission include:

- Financing charges during construction,
- Equity raising costs,
- Cost Model,
- Capacity,
- Land,
- Objectives, and
- Definitions.

1. Introduction

The North West Iron Ore Alliance (Alliance) is responding to an invitation by the Economic Regulation Authority of Western Australia (Authority) on 20 August. 2008 for public submissions regarding the Over-payment Rules and the Costing Principles submissions by The Pilbara Infrastructure Pty Ltd (TPI) with regard to third party access pricing for access to the railway recently constructed by TPI, for iron ore haulage of Fortescue Metals Group Limited (FMG) product from its mine, in the Pilbara region of Western Australia.

The Authority is also separately requesting public comment, by the 15 October, 2008, with regard to an Issues Paper dated 4 September prepared by the Authority on the Weighted Average Cost of Capital (WACC) for access pricing capital components of the rail facilities operated by TPI. As there are common regulatory considerations in both the TPI proposals and the WACC Issues Paper this submission by the Alliance references both.

In addition the Alliance provided submissions to the Authority on 5 September with regard to the other Part 5 Instruments of the Rail Access Code 2000 namely, the Segregation Arrangements, Train Path Policy and Train Management Guidelines. The Alliance submission with regard to the Segregation Arrangements is also referenced in this submission with regard to the TPI infrastructure being viewed in a regulatory determination consideration as a stand-alone railway.

This submission is provided by the Alliance in response to the Over-payment Rules and Costing Principles that have been proposed by TPI received by the Authority on 28 July and 15 August, 2008 respectively.

The Alliance was formed in 2007 to represent the interests of a group of dynamic iron ore companies operating in the Pilbara region of Western Australia. The Alliance's core objective is to work with communities in the region, all three tiers of government, infrastructure providers, existing producers and other stakeholders to promote the development of a vibrant junior iron ore industry. The Alliance comprises four members:

- Atlas Iron;
- BC Iron;
- Brockman Resources; and
- FerrAus.

It is proposed to collectively mine more than 52 mtpa by 2013. Reservation of inner harbour access at Port Hedland Port was

Rail transport is the most cost effective and socially and environmentally acceptable method of moving iron ore produced from geographically remote Pilbara mining tenements to coastal export infrastructure. Given the very strong resistance of long entrenched operators – Rio Tinto and BHP Billiton – to facilitating third party rail access, TPI below rail facilities potentially offer the most cost effective method of delivering ore transport services to the eastern Pilbara. The Alliance is supportive of the State, TPI and its parent FMG with this rail access concept and is prepared to meet its fair and reasonable share of the cost in achieving such access. Timeliness is also very important.

The main body of the attached submission covers the Costing Principles however, as elements of this submission are common to the WACC submission (and vice versa) where a

component of access pricing is mainly applicable to either the proposed TPI Costing Principles or the WACC Issues Paper the matter is responded to in that submission and cross referenced in the other submission.

To supplement the material in the main body of the submission, annexures to the submission are provided in order to set these regulatory issues in their detailed technical or broader commercial context and also provide more detailed commentary on issues associated with the TPI proposals or the Authorities WACC Issues Paper.

2. Background

The Railway and Port (The Pilbara Infrastructure Pty Ltd) Agreement Act 2004 enshrines the principle of multi-user access to rail capacity built under the TPI/FMG State Agreement.

As a critical element in giving effect to an effective multi-user access regime for the railway, the Government announced that the legislation would provide for the TPI rail assets to be subject to the Railways (Access) Act 1998 and the Railways (Access) Code 2000.[1] Section 2A of the Access Act provides that the main object of the Act is to "establish a rail access regime that encourages the efficient use of, and investment in, railway facilities by facilitating a contestable market for rail operations".[2] The Access Act and the Code provisions are directed toward establishing a level playing field and empowering the Regulator to seek these objectives under section 29 of the Access Act.

The aim of the rail access regime is to establish and implement a framework that ensures: **1) effective; 2) fair;** and **3) transparent** competition, on Western Australia's railway network to achieve a net public benefit to the State.

3. Stand-alone Railway

The Alliance strongly supports the underlying intent and the actions taken so far by the Government and FMG to put in place an alternative rail transport corridor for iron ore and other minerals in the east Pilbara that offers rail access to third parties on fair terms.

Looking forward, however, the Alliance is concerned that there are related features of the commercial and operational context to which the Alliance wishes to draw attention that are crucially relevant to third party access regulatory design and oversight:

The Alliance considers that as a vertically integrated operator the railway has been constructed based on the optimisation of the FMG supply chain and structured to meet FMG financial and market obligations rather than a common user railway. This fact must be considered by the Regulator in considering the Costing Principles elements and the

[1] Railway and Port (The Pilbara Infrastructure Pty Ltd) Agreement Act 2004, Part 3.
[2] Railways (Access) Act 1998

Weighted Average Cost of Capital (WACC) elements together regarding the access cost of an efficient railway.

TPI in various parts of their Costing Principles and WACC submissions are submitting that as a new greenfields railway this is an efficient railway and as there are no direct comparators or the calculation of elements of the WACC are complex and result in inappropriate betas so the Authority should accept their actual costs for:

- replacement values, unit rates of costs and design/project management fees in calculating gross replacement fee;
- finance charges – include in the capital cost its cost of capital and related financing fees and charges during the construction period;
- equity raising charges.

However, the line was built in to a budget and timeframe to meet FMG financial obligations and to optimise the FMG supply chain. TPI argue, indirectly, that their actual costs in building the railway that make up the capital cost in the WACC are both Modern Equivalent Assets (MEA) and efficient costs. The Alliance contends that the TPI railway is neither a MEA or represents an efficient cost. The TPI railway construction under taking was a rapid development project which resulted in several diseconomies.

Therefore the Authority should consider with regard to both the Costing Principles elements and the WACC elements that the railway be treated on a stand-alone basis (as detailed in the Alliance submission regarding Segregation Arrangements) and the efficient costs be estimated from a building block approach.

4. Stranding Risk

The Authorities WACC Issues Paper dated 4 September, 2008 discusses the stranding risk and the Alliance is responding to that Paper in detail and in this submission is providing a brief summary in effect that there is minor stranding risk. The Alliance requests the Authority to refer to the Alliance submission regarding WACC dated 15 October for fuller detail.

The issue of stranding needs to considered as TPI are proposing it either applies in WACC, as the difference between the TPI actual debt margin and the benchmark BBB bond rating, or in the Costing Principles as accelerated depreciation for a term contract, as a value included in the operating costs, and as an uplift factor in calculating the ceiling price. In addition to this TPI is also proposing in the Costing Principles to reduce asset economic life on earthworks, bridges and rail curves and include MPM (capital) in operating costs.

The TPI approach to the definition of route sections is that there is only one section of line from Cloud Break to the port dumping facility and is asking the Authority to accept their direct costs of construction and finance and the application of stranding risk as outlined in WACC therefore applies to the whole line (average cost of total capacity) and not limiting the stranding risk to the incremental cost of that additional capacity.

The Alliance is of the view that there is minor stranding risk to the main line as there are mitigation strategies inherent in the access process, and on both the supply and demand sides, there are fundamental market forces which, by any reasonable consideration, suggest this risk is minor and there are also some timing considerations as follows:

- If TPI is considered as a stand-alone railway then FMG's tonnage provides a high degree of risk mitigation and even greater surety than WestNet,
- Further risk mitigation is available by encouraging third parties to access the network from 2010 onwards and provides opportunity to plan for this demand and configure the network efficiently.
- The Authorities review of WACC is annually and a broader review of the Regime is five yearly which allows for unforeseen adjustment.
- The grade, quality, and low cost of Pilbara producers in relation to global supply is a consideration in that these are low cost producers in proximity to major users and price reductions will not result in mine closures as the Asian markets are of such volume and the Pilbara producers are in the lowest quartile of cost.

5. Route Sections

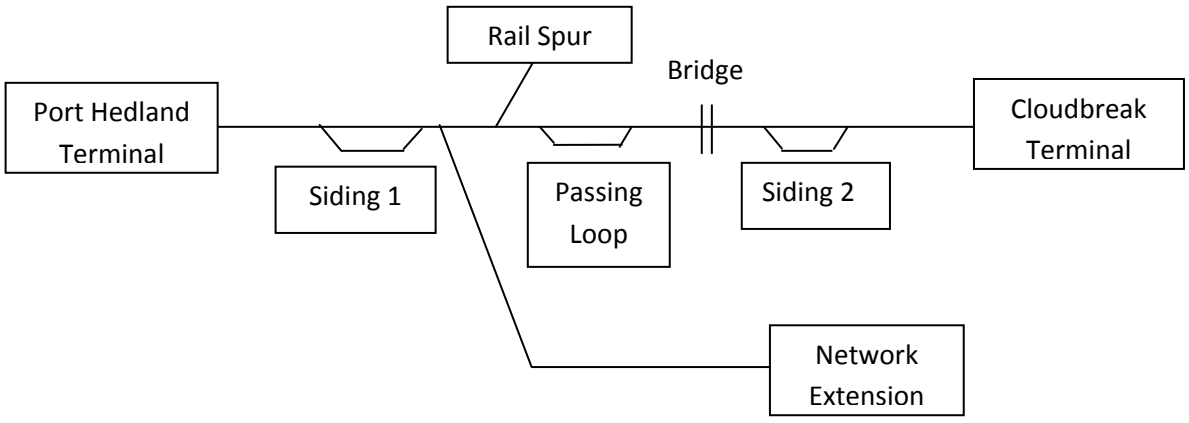
Appendix C of the TPI submission of Costing Principles and section 2.1.1 of the Overpayment Rules outlines TPI's approach to the definition of the Route Sections as:

> *"The railway infrastructure described in the TPI Railway and Port Agreement between the loadout at the Cloudbreak mine and the dump station servicing TPI's port facilities and additional infrastructure at Anderson Point, Port Hedland".*

And,

> "It is proposed that the railway constructed by TPI from Cloud Break to Port Hedland form one route section"

Figure 1: TPI railway schematic.



This approach overly aggregates costs and does not provide transparency or fairness to access seekers as it is likely that there will be many access seekers, based upon existing mining and exploration tenements, between Cloudbreak and Port Hedland.

A fairer and more transparent approach would be to define sections of the entire railway between Cloudbreak and Port Hedland by those sections of track, including multiple line track between sidings, passing loops and terminals.

In this way access charges will more fairly reflect the costs over which the access occurs. For example an access point to the north of the East Alligator River would avoid the use of all bridges on the TPI railway and therefore, rightly, should avoid the costs of their maintenance, renewal and replacement –a not uncommon occurrence in the Pilbara.

The Alliance recommends the following approach be taken with respect to a route and section in the Costing Principles be used:

> *The Code refers to specific "routes" in Schedule 1. In this context, the term is used to define groupings of contiguous track sections between junctions for the purpose of exhaustively listing the track sections covered by the Code. Route is a defined term in the Code meaning "those parts of the railway network and associated infrastructure to which this Code applies, and includes part of a route".*
>
> *Schedule 2 of the Code defines a "route section" as sections of the railway network that has been divided for management and costing purposes.*
>
> *TPI will calculate Floor and Ceiling costs at the route section level, which will then aggregate to provide a total Floor and Ceiling for the "route" nominated by the access seeker. The route section for key parts of the network, which will be used in the application of these costing principles, are included as Annexure* (to be added)*.*
>
> *The route Ceiling costs together with volume detail provided as part of Section 7(1)(b)(i) of the Code will assist access seekers to assess price consistency and accuracy. Schedule 2 of the Code also lists the information relating to the standard of and the characteristics of the infrastructure, together with operating limits, for each route, and which must be provided to access seekers.*

6. Capital Cost of Greenfield Railways

Section 3.1.1 of the TPI Costing Principles proposes to use the actual costs incurred by TPI in developing the gross replacement values (GRV). These values are applied in two ways in determining the access charges. Firstly as a capital charge from the WACC principles and then in the Costing Principles for replacement charges.

TPI argue, indirectly, that their actual costs in building the railway that make up the capital cost in the WACC are both Modern Equivalent Assets (MEA) and efficient costs.

The Alliance contends that the TPI railway is neither a MEA or represents an efficient cost. The TPI railway construction under taking was a rapid development project which resulted in several diseconomies:

- Purchasing of materials for the railway that could be supplied quickly rather than efficiently, in some cases this will lead to higher maintenance costs than the MEA; and,
- Much higher project management and labour costs to build the railway as a result of completing tasks to a schedule rather than to an efficient costs process eg. Large parts of the railway were built by hand rather than using modern track laying equipment.

Consequently the Alliance contends that as in the TPI Rail approved approach to Costing Principles and WACC that the relevant sections of the Costing Principles should be amended in accordance with the suggested wording as detailed in Annexure B – Proposed Amendment to the Costing Principles.

7. Economic Life of Assets

TPI have included Contractors margin and overheads, engineering and contract management and interest on construction in the economic life of assets. These are irrelevant to the economic life of assets, they are not assets in the sense the Authority is considering, and should be removed. The Alliance is suggesting alternative references to these in our proposed wording in Annexure B under the headings Design, construction and project management fees and Financing charge during railway infrastructure construction.

There are many factors to consider with regard to economic life of heavy haul railways and these are detailed in Annexure C (Economic Life of Assets) suffice to say in benchmark terms the TPI proposal is a shorter economic life than that determined by the Authority for Westnet but longer than that determined by the Australian Taxation Office which has implications with regard to the WACC determination.

Commercial railways are able to lease railway track just as they would plant and equipment. This is a highly relevant factor in the case of heavy haul railways and it is suggested that leasing principles be considered especially with regard to residual risk.

When considering railway infrastructure assets and in particular heavy haul infrastructure there is an industry custom and practice of Major Periodic Maintenance (MPM) which renews the asset. MPM is not repairs and maintenance it is renewal of the asset.

TPI also propose a shorter life for a time limited project but once again by having only one section of line this means that there is a main line to multiple locations and spurs to a single terminal. Therefore the shorter life application should be for non-main line extensions or expansions, for example if a rail spur was put in off the main line to cater for a project-limited-expansion with a reduced economic life then after project termination this should not affect the main line as further capacity is needed over time.

8. Major Periodic Maintenance and Depreciation

The depreciation in WACC is applied to the asset base which should be a gross replacement value of an efficient railway not adding to the replacement cost by accepting TPI's actual costs. MPM is replacement of the track and the cost driver should relate to operational standards. TPI is proposing that in addition to depreciation (which could be inflated by stranding risk, etc) that where MPM is undertaken to achieve the economic life of the assets that this be included in operating costs.

In this regard the Alliance would reference the Australian Competition and Consumer Commission (ACCC) Draft Decision, Access Undertaking – Interstate Rail Network, Australian Rail Track Corporation (ARTC), April 2008[3] in which the ARTC do not claim depreciation but claim only MPM as this is renewing the track which the ACCC accepts.

ARTC treat replacement as that needed to a greenfield site to a standard. TPI do not state a standard that the railway will operate to and propose any cost of relocation during construction be included (refer Section 3 Stand-alone Railway above).

As stated previously the Alliance members are prepared to share the fair and reasonable cost of ensuring the railway can perform the task. Also as stated previously in Section 6 that the TPI railway construction under taking was a rapid development project which resulted in several diseconomies and given the difficulties of estimating the capital base (aside from stranding risk) the Alliance would suggest that the Authority consider the use of MPM in lieu of depreciation. Such an approach would ensure that the railway was at a standard (to be nominated) to meet the task, TPI had incentive to undertake MPM and the Alliance members had incentive to fund the investment. Another benefit of this approach is that it would reduce the estimation errors in estimating WACC and provide openness as to the capital works program to meet the operational standard.

9. Allocation of Operating and Overhead Costs

Section 4.3 Allocation of operating costs, does not provide sufficient transparency to the allocation of costs and potentially may lead to the unfair allocation of costs as the route section definition in the document covers the entire railway not just that part used by the access seeker. Consequently we request section 4.3 is replaced together with our proposed definition of the route section with:

> *Track and signalling maintenance costs are directly allocated to route sections based on the nature and population of the infrastructure. Allocation of non-sector specific operating costs including costs in Part (a) of the definition of "Operating Costs" in Schedule 4 of the Code is in accordance with the allocation rules using GTK or train movements as listed in the table below.*

[3] Section D.5.3.10 Return of Capital

Section 5.2 on Allocation of Overhead cost, again suggests an allocation on route sections when that represents the entire railway. As in the operating cost allocation approach above we recommend this section be replaced with:

> *TPI has considered the correlation between the allocation proxy and the causality of the cost for categories of overheads. An allocation table is provided below. In general terms, train movements have been linked to train control and related support and management functions and the management of maintenance related functions have been linked to Gross Tonne Kilometres. TPI is of the view that this will provide the most appropriate allocation between users.*
>
> *Two proxies are used to allocate overheads. GTK's are used to allocate costs which vary more in quantum due to volumes moved, and train movements are used to allocate costs which vary more in quantum due to the number of train movements.*

Table 1: Operating and Overhead Cost Classification

Cost Classification	Description	Inclusions
Operating Costs		Access management; train control; train scheduling and operations planning; safeworking management; telephone charges; and radio licences.
Overheads	(i) Infrastructure management costs	Maintenance management; engineering support; and inventory holding costs.
	(ii) TPI overheads	Corridor management; access compliance costs; net costs of computers, office equipment, furniture, and motor vehicles; safety accreditation costs; and TPI management costs.
	(iii) Corporate overheads	Information system; payroll; contracts, purchasing and supply; accounting; public relations; human resource management; administration; and insurance.

10. Other Issues

Financing charges during construction

The proposal reads that TPI "will include in the capital cost an allowance for its cost of capital and related financing charges during the construction period" and "reliance may be able to be

placed on actual historical cash flows during the construction period"[4]. The Alliance would request the Authority that the TPI railway be considered for access pricing purposes as a stand-alone entity using a Regulatory building block approach.

Equity raising costs

The TPI proposal states the estimate will include the direct costs of raising equity finance and all other costs not covered by the underwriter's commission[5] and the Alliance would request that these types of cost be benchmarked.

Cost Model

TPI are proposing the development of a Costing Model within 18 months of Regulatory approval of the Costing Principles in relation to having actual cost data experience[6]. The Alliance would submit that the purpose of Regulated access pricing is a stand-alone building block approach to a predetermined operational standard. In view of the planning timeframe and the certainty required for access pricing the Alliance would request that this timeframe be shorter and suggest 6 months.

Capacity

TPI states "TPI considers that the network as constructed can meet current and reasonably projected demand"[7]. WestNet in its Costing Principles has an exact same sentence except it adds to the sentence by stating "for all users taken together"[8].

Land

Land leases are included in the ceiling price but TPI do not say what these leases are for or if they should be in TPI's operating cost (generally Regulators exclude land),

Objectives

The Alliance would suggest that an objectives clause be added such as that in Section D.1. of the ARTC Access Undertaking, July 2008.

Definitions

The Alliance would also suggest that a definitions clause be added such as that in Section 8 of WestNet Costing Principles August 2006

[4] TPI proposal Section 3.1.1

[5] TPI proposal Section 3.1.1

[6] TPI proposal Section 2

[7] TPI proposal Section 3.1.1

[8] WestNet Rail Costing Principles September 2007 Section 2.3

Annexure A – Emerging East Pilbara Projects

Figure 1: Location of emerging iron ore projects in the east Pilbara

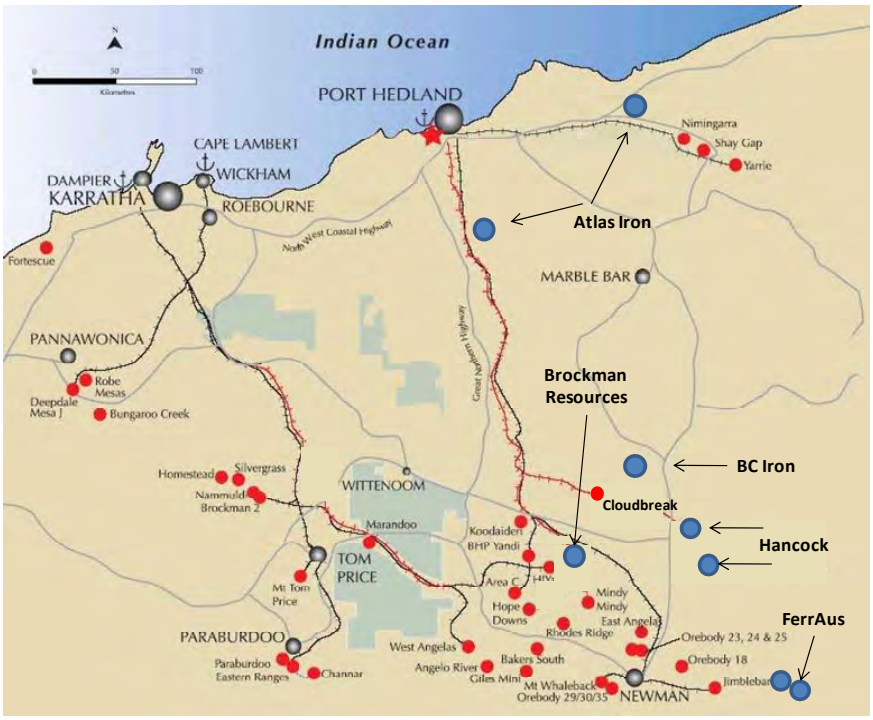


Figure 2: Discovered and Potential controlled Hematite and Magnetite Ore Resources in the East Pilbara (indicative only)

Million Tonnes		Bedded Ore			Channel Iron Deposits		Detrital		Magnetite Resources	Annual Production (Mtpa)	
		Reserves	Resources	Potential Total	Resources	Potential Total	Resources	Potential Total		2013	2020
Atlas Iron Limited										17	22
	Pardoo	7.4	24.1	40							
	Abydos	7.4	15.1	140							
	Ridey Magnetite								1300@36.8%Fe		
BC Iron Limited					28	50				5	5
Brockman Resources Limited					58	80	1500	1500		15	25
FerrAus Limited										15	25
	Davidson Creek		7.4	155							
	Robertson Range		45	160							
Total		14.8	91.6	495	86	130	1500	1500	1300	57	77

Annexure B – Proposed Amendment to the Costing Principles

As outlined in Section 6 of the Submission the Alliance contends that the TPI railway is neither a MEA or represents an efficient cost. The TPI railway construction under taking was a rapid development project which resulted in several diseconomies. Consequently the Alliance suggests that as in the TPI Rail approved approach to Costing Principles and WACC that the relevant sections of the Costing Principles should read as follows:

Greenfields Site

For the purposes of calculating the GRV, the replacement cost calculations are to assume a greenfields site and hence costs related to constructing around rail traffic, surface restoration and other surface diversions are excluded from the GRV.

Modern Equivalent Assets

Replacement values are to be assessed on the basis of Modern Equivalent Assets ("MEA"), where appropriate. TPI considers that the majority of the existing track configuration (that is sleeper type, rail weights, etc.) can be adopted as the MEA. It is assumed, however, that this track configuration is new in accordance with the Code. Where the Ceiling costs calculated for a specific route using MEA is significantly higher than the existing infrastructure calculation, the Regulator may determine that it is not appropriate to apply MEA. Under these conditions the pre existing infrastructure may be used in determining the Ceiling costs if the existing infrastructure meets current and anticipated operational and safety standards and if the infrastructure components are available in the market.

However, TPI recognises that the Regulator, when determining the Floor and Ceiling on the various routes as part of the Clause 9, Schedule 4 of the Code review, will decide the MEA applicable to the route sections.

TPI calculates the GRV using current market tested unit rates for materials and construction based on the MEA, or using the existing infrastructure, if appropriate. All Ceiling costs will be calculated using best practice capital cost unit rates. Where there is a likelihood that the Ceiling cost calculation for a route section has the potential to breach the Ceiling, the Regulator may require an independent review of these costs. The key steps required to complete a GRV estimate based on MEA are:

- *identify the route for which the GRV is being calculated;*
- *assess the existing railway infrastructure specification to ensure that the MEA test is appropriate;*
- *review asset databases to ensure the population of assets is correct;*
- *confirm existing network capacity will meet current and reasonably expected future demand on the network;*
- *confirm unit rates are based on efficient costs;*

- *complete an analysis of each asset class to optimise the network to a MEA; and*
- *calculate the current replacement cost GRV of the railway infrastructure using the MEA or existing asset specification if appropriate.*

The key capital cost drivers TPI will adopt to ensure a MEA network are:

- *the operating track standard (axle load, speed);*
- *population of supporting infrastructure (bridges, culverts); and*
- *topography of route (gradient and track curvature).*

The operating standards that TPI will apply for determining GRV are the documented standards that TPI has used to construct the existing railway and the Guidelines of the International Heavy Haul Association or equivalent Australian Railway standards.

Unit Rates

TPI has built unit rates into the TPI Costing Model based on:

- *an independent engineering firm's report;*
- *tendered rates TPI has tested in the market; and*
- *direct quotations from suppliers,*

Where these rates have any adjustment for scale or scope or the impact of location these assumptions will be included.

This information is contained in TPI's Costing Model and will be made available to the Regulator and contains information of the source and the assumptions that are currently used in the model. In addition, TPI will identify and provide to the Regulator unit rate information and assumptions that it considers can be released as part of the public consultation process for the Regulator's Clause 9, Schedule 4 of the Code determination on the floor and ceiling costs to apply to certain routes.

Design, construction and project management fees

TPI will apply design, construction and project management fees at a rate of 20% of the total cost of the infrastructure and based on an economic life of 50 years. Because TPI uses primary unit rates for establishing construction costs, it is appropriate to charge project management fees on the cost calculated for the infrastructure. In cases where such fees are included in unit rates, TPI accepts that the project management fees should be reduced to account for such charges, keeping total design, construction and project management fees in line with a 20% limit.

Financing charge during railway infrastructure construction

The Code requires that the GRV for railway infrastructure be applied as part of the calculation of the capital charge. Consistent with this approach is that TPI will include in the capital cost an allowance for the cost of capital and related financing fees and charges during the construction period.

TPI will apply the WACC determined by the Regulator to the construction cash flows to calculate the financing charge. Upon completion of construction, the interest calculation ceases. In determining the annuity payment attributed to such costs, a 50-year economic life assumption will be utilised.

Construction rates will vary depending on scale and scope and also the geography and the impact of other infrastructure on the route. TPI has used an average construction rate of one kilometre per day. This rate will be based on the entire route and allocated to route sections on a per kilometre basis. The Regulator may consider a higher or lower rate in some sections of the network and adjust the construction rate accordingly.

Annexure C - Economic Life of Assets

The Commissioner of Taxation has recently issued a taxation ruling, TR 2008/4 that sets out a method for determining the Economic Life of Assets. The following paraphrases this ruling and has examples added relevant to the rail industry the subject of the submission.

In addition, WestNet's own approved Costing Principles sets out its evaluation of the economic lives of its infrastructure based on the application of modern equivalent assets (MEA) with new components and key determinants of asset life such as environmental factors, which will have an impact to extend or reduce the life of the asset. This evaluation is based on generally accepted industry lives and WestNet's own experience. The lives adopted by WestNet are generally consistent with those accepted in other regimes.

The following table lists the Economic Life estimates of TPI, ATO for the Heavy Haul Industry and the approved WestNet Rail estimates for the Heavy Haul industry approved by the Regulator.

Table 1: TPI compared to ATO Economic Life of Assets comparison.

		Infrastructure	TPI Life Expectancy (Years)	ATO Life Expectancy (Years)	WestNet Life Expectancy (Years)
1		Earthworks for track	50	30	100
2		Bridges, tunnels and culverts			
	a	Bridges (not footbridges)	50	30	100
	b	Culverts	50	30	50
3		Level crossings	20	15	20
		Access roads	10	-	10
4		Fencing of track	15	20	15
5		Track materials			
	a	Rail life	>20MGT	30	
		Curve < 400m	6	30	6
		Curve 400-800m	10	30	10
		Curve > 800m & tangent	20	30	60
	b	Turnouts	>20MGT	20	
		Bearers concrete	30	20	30
		Blades and stock rails	4	20	4

		Infrastructure	TPI Life Expectancy (Years)	ATO Life Expectancy (Years)	WestNet Life Expectancy (Years)
		Rail bound crossing	10	20	10
		Balance of turnout	20	20	20
	c	Sleepers	50	30	50
	d	Ballast	25	30	25
	e	Jewellery	25	30	25
6		Track construction	50	30	50
7		Roads and shunter's pathway	10		10
8		Signalling			
	a	Track construction	20	15	20
	b	Flashlights	20		20
	c	Boomgates	20		20
9		Communications	20	20	20
10		Maintenance			
	a	Track signs	10		10
11		Contractors margin and overheads	50	✘	50
12		Engineering and contract management	50	✘	50
13		Interest on construction	50	✘	50

The determination of the economic life of a depreciating asset is undertaken by estimating the period it can be used by any entity, including other industries, and assumes: it will be subject to normal rates of wear and tear; it will be maintained in reasonably good order and condition; and having regard to the period within which it is likely to be scrapped or abandoned (e.g. earth works).

TPI have included Contractors margin and overheads, Engineering and contract management and interest on construction in the Economic Life of Assets. These are irrelevant to the Economic Life of Assets, they are not assets in the sense the Authority is considering, and should be removed.

Each factor is considered on the basis of historical information and future expectations. In this case for the railway industry and in the context of a heavy haul mining operation. No one factor is necessarily conclusive and the relative importance of each will vary depending on the nature of the asset. In considering these factors one takes account of normal heavy haul railway industry practices.

The factors to consider include:

- the physical life of the asset;
- engineering information;
- the manufacturer's specifications;
- the way in which the asset is used by the industry;
- the past experience of users of the asset;
- the level of repairs and maintenance adopted by users of the asset;
- industry standards;
- the use of the asset by different industries;
- retention periods;
- obsolescence;
- scrapping or abandonment practices;
- if the asset is leased, the period of the lease;
- economic or financial analysis indicating the period over which that asset is intended for use; and
- where the asset is actively traded in a secondary market, conditions in that market.

Physical life

It is arguable that an asset can be used for these purposes while it continues to have a physical existence, that is, until it is physically exhausted. Historical physical life is best determined by empirical evidence.

Engineering information/manufacturer's specifications

An analysis of engineering information and manufacturer's specifications is important when estimating future physical lives. There are various reasons why the expected life of a new asset may differ from that achieved in the past. These reasons include advances in technology, different construction materials, intensity of use and the levels of repairs and maintenance.

Physical life/effective life

It is important not consider that the physical life of an asset is necessarily its effective life because all the factors must be considered before an estimate of effective life is made. A consideration of these factors may often indicate that an asset's effective life is a period shorter than its physical life eg. A bridge may have a physical life of 100 years but only an effective life of 50 years depending on advances in the weight of vehicles using the bridge.

The way in which an asset is used by an industry/the past experience of users of the asset

How intensively the industry uses an asset may impact directly on the asset's effective life. Often assets are not used for the relevant purposes for the whole of their life. For example, assets may be retired from use for the relevant purposes but be retained as a source of spare parts. In this instance, their effective life may end at the time they are retired. For

example railway track is rarely scraped it is usually reused in less critical areas such as sidings and then finally reused for fencing and reinforcing for earth works.

Repairs and maintenance

It might be suggested that the life of an asset can be extended indefinitely if there is unlimited expenditure on repairs and maintenance. However, this is unreasonable and we assume that an asset will be maintained only in reasonably good order and condition. Accordingly, the effective life of an asset may end when it is no longer economic to maintain it, even though it may still be possible to do so. To establish that point in time the industry norm is considered.

When considering railway infrastructure assets and in particular Heavy Hail infrastructure there is an industry custom and practice of Major Periodic Maintenance (MPM) which renews the asset. MPM is not repairs and maintenance it is renewal of the asset.

Renewals

Another reason why the level of repairs and maintenance is considered is to see if it is possible to ascertain a point in time when an asset has been wholly or substantially physically replaced. If an asset has been wholly or substantially physically replaced then it is considered its effective life has ended as it is, in fact, a new asset. Ballast, points and switches and railway track are usually subject to very large MPM programs in railways.

Industry standards

There are industry standards/regulations which set the level of repairs and maintenance that must be carried out. These standards are set out in Rail Industry Safety Standard Board guidelines and standards, International Heavy Haul Association guidelines and Australian Standards.

Use of the asset by different industries

The use of an asset by different industries is another important factor. The use may be parallel or consecutive. An example of parallel use is the use of heavy haul railway track being reused in sidings and yards for relevant purposes generally. In these circumstances, the effective lives are different. This reflects the increased wear and tear experienced by a piece of track used on a mainline.

The consecutive use of an asset arises where it is used by different users for different purposes during its physical life. In determining the effective life of some assets, the period for which a particular asset can be used by anyone else for its intended purpose can be estimated, without regard to the possible subsequent use of the asset by another organisation for an entirely different purpose.

However, that approach should only be taken where the subsequent change in use is significant and the proceeds received on disposal are small relative to the asset's original cost. An example of this is a railway track which, at the end of its effective life as a railway track, may be used for a variety of other purposes, including as reinforcing and fence posts. In that situation, the rail track would, nevertheless, have an effective life in the hands of the purchaser when it commences to be used as a fence post.

Retention period

The retention period is the period any one generally holds an asset. The effective life of an asset is the total period it can be used by any entity for the relevant purposes. That may not necessarily be the period a particular organisation expects to hold it before replacing it.

Obsolescence

An asset may become obsolete for both commercial and technological reasons. Commercial obsolescence may occur if, for instance, market demand for the goods produced by the asset ceases through consumer preference or Government regulation. It may also occur if the raw material the asset processes becomes unavailable. But in the case of Heavy Haul railways the use of the infrastructure may be transferred to other minerals and mining products in the vicinity of the railway.

Technology may advance so that another asset is better suited for the relevant purpose for which an existing asset is used. The point to note about technological advances, however, is that an asset's effective life does not necessarily end with each technological advance. An organisation can still use an asset for the relevant purposes even though a newer model has come on to the market. Obsolescence is only considered when it prevents the continued use of the asset for the relevant purposes. This is best evidenced by scrapping practices. Technical advances in driverless systems may render train control systems redundant for example.

Scrapping or abandonment practices

Scrapped or abandoned assets, there is a presumption it can no longer be used by anyone for the relevant purposes. The scrapping of an asset demonstrates that the asset is either physically exhausted or obsolete. An asset may be abandoned if it is too difficult or costly to remove from its place of operation eg. Railway bridges.

Lease periods

Because effective life is, among other things, the period a depreciating asset can be used for the relevant purposes, it is unlikely that an asset would be leased for a period greater than its effective life. Consideration of this factor will, in many instances, suggest that the effective life of an asset is no shorter than the period it is leased.

Commercial railways are able to lease railway track just as they would plant and equipment. This is a highly relevant factor in the case of Heavy Haul railways.

Financial analysis

As with lease periods, economic or financial analysis indicating the period over which an asset is intended for use gives guidance that the effective life is no shorter than that period. In many instances, the analysis may only reflect the capital cost recovery period or the term of a contract when in fact the asset may be used for the relevant purposes by any entity for a much longer time.

Market value

The defining character of a depreciating asset is that its market value actually falls, or is expected to fall, over time. An analysis of the decline of market values of an asset class, therefore, is an important factor together with those set out above to ensure that a determination of effective life provides appropriate deductions.