



20 January 2015

{by e-mail}

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Dear Matthew

Further Submission on ACCC Discussion paper on ARTC Compliance to Financial Model 2013

I am writing in response to ACCC's paper dated 26 November 2014 which invites submissions in relation to ARTC's compliance with the financial model in the Hunter Valley Access Undertaking (HVAU).

The ACCC has asked stakeholders to respond to questions around the prudence of capital expenditure, efficiency of operating expenditure as well as revenue allocation calculations and reconciliation review processes.

Whilst ARTC has previously provided information on revenue allocation practices, the approach is complex and the ACCC discussion paper has stimulated concerns from a number of stakeholders. Any change to the current revenue allocation process is likely to have a significant impact on Pricing Zone 3 (PZ3) producers as well as implications for ARTC's currently efficient investment approval process.

As highlighted in the previous Whitehaven Coal submission dated 28th August 2014, the revenue allocation process adopted by ARTC has been previously applied to Pricing Zone 2 (PZ2) users when mines were being developed on the Ulan line, has a long history in the Hunter Valley and is supported by regulatory precedence in other Australian coal supply chains.

Current access pricing arrangements with the ARTC, which are in accordance with the HVAU, provide the required certainty around future cost, volume and price expectations. Any retrospective changes to these pricing arrangements undermines previous investment decisions as well as destabilizes the ability for ARTC to gain investment approvals into the future.

The HVAU commenced in July 2011 after an extensive three year industry consultation period. Any changes to ARTC's revenue allocation process mid-HVAU term that impacts long term



pricing, will undermine the extensive industry consultation process on which the HVAU was based.

Whitehaven believe that due to the complexity of the required methodology and to ensure future investor confidence any proposed changes to the revenue allocation process should be discussed and agreed during the consultation process for the new HVAU in 2016.

As Whitehaven has previously provided significant information on this topic through the ACCC review process, this paper should be read in conjunction with the previous Whitehaven submission on Revenue Allocation and Final Indicative Services. This includes the Strategy & Submission Report which for convenience to the reader has been attached as an addendum to this paper.

ACCC Questions for Stakeholders

1. Does the industry have comments on any aspect of ARTC's capital expenditure additions, interest during construction or disposal amounts for the 2013 Compliance Report?

It is Whitehaven's understanding that ARTC have followed due process as set out in the HVAU for all Major and Minor Capital approvals. Transparency of information through the RCG to member companies is acceptable.

Whitehaven is comfortable with the Interest During Construction and Disposal amounts as submitted. Given the highly competitive global coal market it is expected that ARTC will be investigating all avenues to minimize interest costs (including alternate short term funding sources where available) and maximizing disposal values (through active asset management), with the goal of minimizing total cost of service to the Coal Chain. The allocation of resources for these functions where appropriate and presentation of options would be viewed positively by Whitehaven.

2. Does industry have any comments on any aspect of ARTC's operating expenditure, including maintenance costs, expensed projects, network control and corporate overheads for the 2013 Compliance Period ?

Whitehaven believes the information provided in the ARTC submission for the Constrained Network is acceptable. It is also believed that the same level of information should be afforded to the Unconstrained Network to allow a similar analysis to be undertaken by all parties. This becomes more relevant in the situation where cost decrease trends differ across networks as is the case in 2013.

With regard to the Constrained Network, Whitehaven notes the following on ARTC's efficiency:

- A decrease in maintenance costs per tonne is a positive outcome given current market conditions provided that the rail infrastructure is able to operate at a consistent level capacity to efficiently deliver all contracted demand. Whitehaven encourages ARTC to have

plans in place to ensure costs per tonne do not increase in future periods due to the maintenance deferral.

- The process for expensing the T4 enabling projects within the HVAU was followed by ARTC with approval being gained through the RCG members therefore Whitehaven has no issue with this expense.
- ARTC should be commended for decreasing network control costs and corporate overhead in a year where capacity and throughput increased. This trend should be an objective for ARTC into the future.

3. Does industry have any comments about the ACCC's application of the standalone cost test contained in section 4.3(a) of the HVAU that requires incremental costs (as opposed to Direct Costs) of the use of Pricing Zone 1 by Pricing Zone 3 Access Holders to be taken into account in determining the ceiling revenue limits ?

Does industry have any comments on how the capital investments in Pricing Zone 1 should be itemised to determine the incremental cost of Pricing Zone 3 Access Holders? If yes, please explain the approach and rationale.

Does industry have any further comments on revenue allocation and reconciliation?

Prima Facie Whitehaven has no specific issue with the proposed ACCC application of a standalone cost test for determining ceiling revenue limits. The concern is the investment uncertainty that is raised by any retrospective ARTC revenue adjustments as well as the ability to accurately and objectively identify and cost PZ1 investments that are related to other Pricing Zones.

It is also difficult to argue that the current ARTC allocation approach distorts competition by transferring costs from PZ3 to PZ1 producers. The additional cost to PZ1 producers of approximately \$0.05 / tonne relative to the average FOB cost is immaterial.

Investment Uncertainty

Whitehaven acknowledges that in the HVAU the incremental cost rather than the direct cost should be used to determine the ceiling limit and floor price in each zone, but past practice has been that in Unconstrained Networks direct cost has been used (previous Pricing Zone 2 pricing). As this was a widely known and accepted practice, it would seem inconsistent for the coal chain to argue for a change to this practice midterm of the HVAU.

Given that the current methodology used by ARTC for Revenue Allocation has been in place and widely known by the industry (given that PZ2 pricing was calculated using the same methodology when it was unconstrained) and also given that the ACCC proposed changes would decrease costs for PZ1 & PZ2 access holders at the expense of PZ3 access holders it would seem opportunistic to argue for a change to this methodology until a new HVAU is agreed.

A fundamental change in the interpretation of “standalone costs” in the middle of the term of the current HVAU contradicts the principles that the HVAU provides and has been operating under. The HVAU was requested by the Coal Chain to provide clarity and certainty for long term investment decisions to be made in a multiuser, competitive network. The principle of allowing any retrospective changes to agreed methodologies undermines previous investment decisions but more importantly creates uncertainty for any investment approvals for ARTC’s infrastructure into the future.

Whitehaven understands that some proposed capacity creating projects have options to be located in different Pricing Zones. Under an allocation system that does not fairly assign costs to the PZ that is gaining the advantage this may lead to significant delays to projects that benefit all PZ1 producers but will be charged only to PZ2 or PZ3 producers. It could alternatively be argued that any changes to the Allocation Process may inhibit new mining projects and expansions in PZ3 leading to a decrease in competition in the Hunter Valley.

Incremental Cost determination issues

Whitehaven believes it is too simplistic in determining Incremental Costs to just identify investment in PZ1 that relate to other Pricing Zones. There are a number of other related cost allocation issues to be considered as set out below.

In recent history the scenario where investment in PZ3 has increased capacity for PZ1 users has been consistent. Investment in PZ3 during the current HVAU by only two producers has made available approximately 1,000 additional train paths in PZ1 above the paths required by the PZ3 producers. Without this investment funded by only PZ3 producers, there would not currently be sufficient train paths for all PZ1 contracted tonnages. This would have led to increased capacity investment required in PZ1. This PZ1 “capacity release” should be taken into consideration and netted off against the Incremental Cost calculation.

Whitehaven also sees inconsistencies around terminal infrastructure cost allocation that may lead to potential calculation issues. As an example, infrastructure at Kooragang Coal Terminal Arrival Roads has been included in the PZ1 RAB as a total system capacity benefit, rather than on a terminal usage basis. This was not the case with the NCIG flyover project which has been funded by NCIG producers only. The Incremental cost calculation should also take into account projects that are used more by specific producers, on a “user pays” basis.

PZ3 producers require shorter rail infrastructure (1,350m) across the network due to limitations in infrastructure in PZ3. All PZ1 infrastructure is currently designed and built for approximately 1,600m trains therefore all PZ1 projects are overdesigned for PZ3 requirements. An Incremental Cost calculation should take into consideration the additional cost of longer passing loops and signal sections required only for PZ1 & PZ2 producers and adjust PZ3 producer pricing down accordingly.

In summary, we believe a true Incremental Cost calculation would require:

1. Identification of % of projects in PZ1 relating to additional pathing requirements for PZ3, (or identifying projects relating solely to additional pathing requirements for PZ3)
2. Calculation of the % of PZ1 project investment for PZ3 additional pathing requirements, on a *marginal cost basis* (given these shared projects would have been completed without PZ3 requirements therefore fixed costs should be excluded from the calculation)



3. Identification of projects in PZ3 that releases additional pathing for other access holders in PZ1 or PZ2. Analysis of avoidable investment costs for PZ1 due to PZ3 investment.
4. Calculation of cost of PZ1 projects based on PZ3 infrastructure requirements (noting PZ3 infrastructure requirements are less than PZ1 & PZ2).

This is a difficult calculation with a number of subjective components involved that will require agreement on methodology for each point above. Given the short time available for consultation on these calculations in the Revenue Review process, Whitehaven believes the existing process should be held for the current HVAU, and changes be discussed and agreed during consultation on the 2016 HVAU.

Summary

ARTC in 2013 were able to decrease unit costs through management of maintenance, network control and overhead costs. This is a positive outcome for the industry and this trend should be continued for the long term global competitiveness of the Hunter Valley.

With regards to changes to the revenue allocation process, our assessment is that the HVAU has been consistently administered throughout the current HVAU and as such there is no justification for using the compliance review to change the fundamentals of ARTC pricing practices.

There appears no compelling rationale to significantly change ARTC's approach at this stage in the HVAU term. Any changes that are not agreed by the industry will likely lead to investment uncertainty for the duration of the current HVAU.

Given the complexity of the calculation required for the changes posed by the ACCC Position Paper, Whitehaven believes the methodologies should be discussed and agreed by the industry as part of the next HVAU negotiations.

Please contact me if you would like further clarification on the above.

Yours sincerely,

Keiron Rochester

GENERAL MANAGER – INFRASTRUCTURE

Attachment: Strategy & Access Revenue Allocation Report

strategy&

Formerly Booz & Company

SUBMISSION REPORT

Access Revenue Allocation

&

Sydney

August 2014

Version 2.0



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1. Introduction

1. Idemitsu Resources Australia Pty Ltd (Idemitsu) and Whitehaven Coal Ltd (Whitehaven) have jointly retained PwC Strategy& (Australia) Pty Ltd (“Strategy&”) to provide access revenue advice regarding the Australian Competition and Consumer Commission’s (ACCC) recent “Revenue Allocation Review” Discussion Paper related to the Hunter Valley Rail Network Access Undertaking (HVAU).

1.1. Background

2. Idemitsu and Whitehaven are the two major coal producers in the Gunnedah Basin in NSW with both current and prospective coal mining operations. Coal from the Gunnedah Basin mines is shipped by rail for export through the Port of Newcastle. Although mines located in the Gunnedah Basin face a comparatively long haul distance compared to other mines in the Hunter Valley, export volumes from the Basin are forecast to grow significantly over time. Volumes from existing mines located at Turrawan, Boggabri, Gunnedah and Werris Creek will be expanded by new mines currently in varying stages of development at Maules Creek, Vickery South, Watermark and Caroonna.
3. Recently the cost challenges facing Australia’s mining industry have become more acute. The industry in Australia faces growing pressure to compete with lower cost producers internationally and the easing of the mining boom (and lower global prices) restores a focus on cost and efficiency, in place of recent focus on capacity and expansion. Users of the Hunter Valley network are facing a number of challenges in both sustaining the on-going viability of mining operations and being able to economically underwrite potential expansions. Producers in the Gunnedah Basin face the additional challenge of below rail costs which are higher than those faced by other users of the Hunter Valley network, and higher above rail costs which arise from characteristics of the below rail infrastructure.
4. The Hunter Valley rail network is currently managed by the Australian Rail Track Corporation (ARTC) with access regulated through the HVAU administered by the ACCC.

1.2. Terms of Reference

5. Idemitsu/Whitehaven have defined a Terms of Reference for Strategy&’s consideration of the issues identified in the ACCC’s Discussion Paper. The Terms of Reference are set out below:
 - (i) Research and provide commentary on ARTC’s access pricing practices in the Hunter Valley having regard to:
 - a. Network development potential of the Gunnedah Basin coal region;
 - b. Pricing principles set out in the Hunter Valley Access Undertaking;
 - c. Current ARTC pricing practices
 - d. Economically efficient pricing practices for below rail access;

- e. Regulatory precedent in the Hunter Valley and in other jurisdictions;
- f. Investment to improve system capacity;
- g. Issues raised by the ACCC;
- h. Address any issues raised by other stakeholders in respect of the ACCC review.

(ii) Where appropriate, recommend improvements to the current pricing approach.

1.3. Structure of the report

- 6. This report presents our findings and is structured into two further sections to follow the Terms of Reference:
 - A discussion of the ARTC's pricing practices and relevant context; and
 - A review of the current revenue allocation approach and suggested improvements.

2. ARTC pricing practices

2.1. Introduction

7. This section provides a review of ARTC pricing practices having regard to the factors set out in the Terms of Reference. The structure of the section addresses each of the factors:

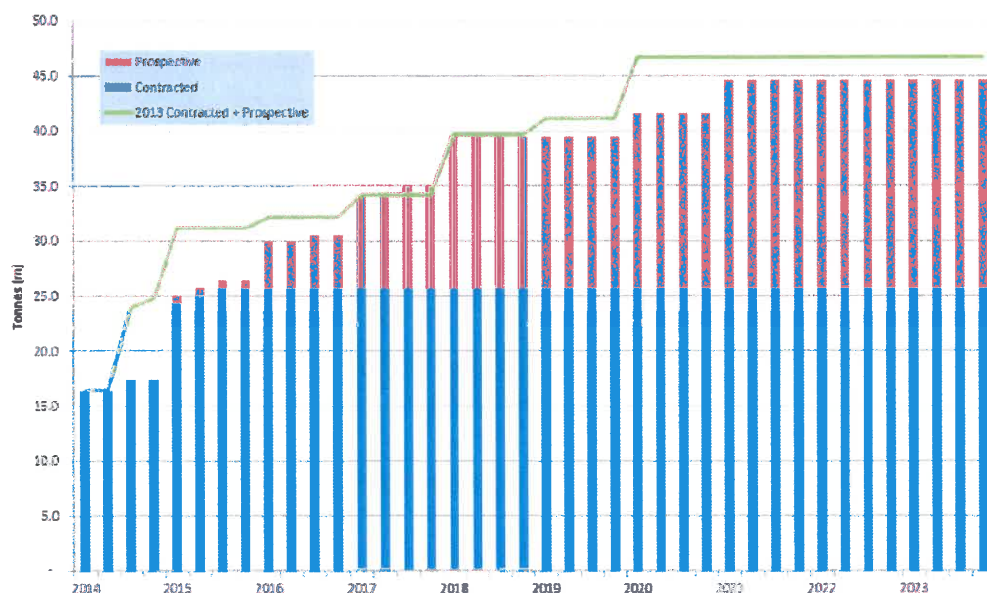
- Network development potential of the Gunnedah Basin coal region;
- Pricing principles set out in the Hunter Valley Access Undertaking;
- Current ARTC pricing practices
- Economically efficient prices for below rail access;
- Regulatory precedent in the Hunter Valley and in other jurisdictions; and
- Investment to improve system capacity.

2.2. Network development potential of the Gunnedah Basin coal region

8. The Gunnedah Basin is a developing coal region with good growth prospects. Export volumes from the Gunnedah basin have potential (subject to viability of a number of prospective projects) to increase significantly from in excess of 15 mtpa in 2014 to in excess of 40 mtpa in 2020 – a compound annual growth rate of over 25%.

9. ARTC has provided a summary of contracted and prospective growth in the Gunnedah basin as summarised in Figure 1 below. Contracted volumes are those that are subject to a binding contract compared to prospective volumes that are associated with projects that are moving forward but not yet at a stage where producers wish to commit to a contract.¹

Figure 1 – Contracted and Prospective Volumes, Werris Creek – Muswellbrook (Gunnedah line) (million tonnes per annum)

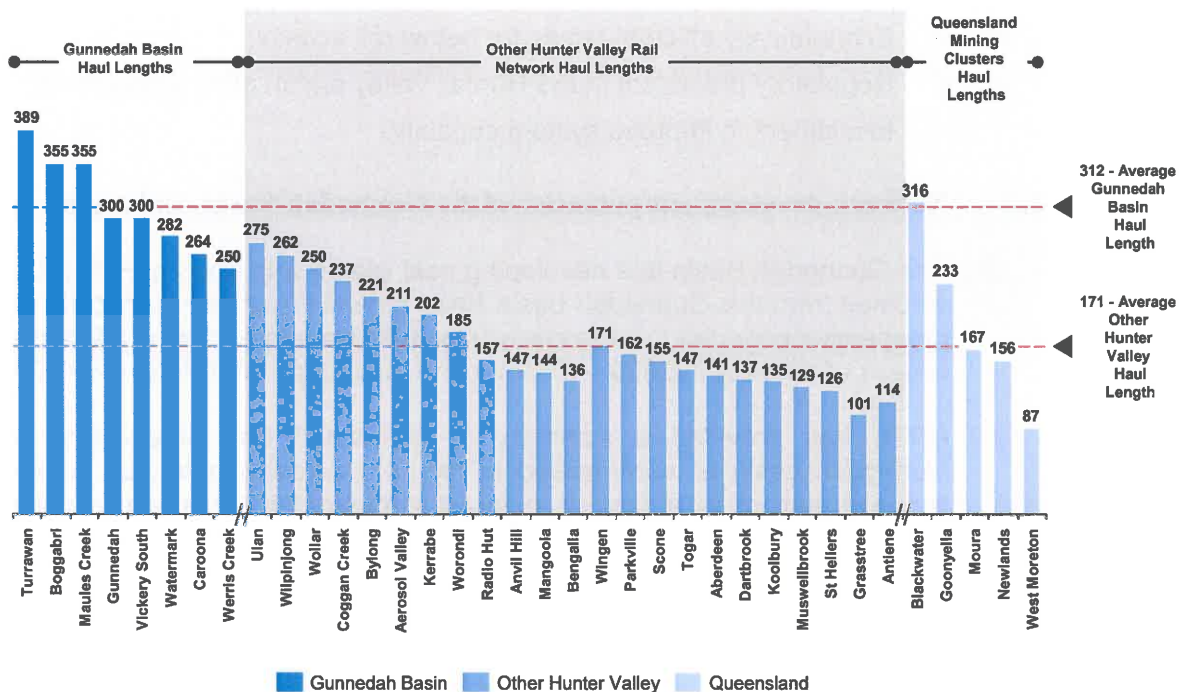


¹ See 2014-2023 Hunter Valley Corridor Capacity Strategy – Consultation Draft, June 2014, p12.

Source: 2014-2023 Hunter Valley Corridor Capacity Strategy – Consultation Draft, June 2014.

10. There will be a range of factors that will influence the competitiveness and growth of mines in the Gunnedah Basin, consideration of which are beyond the scope of this analysis. However in respect of rail transport, the Gunnedah Basin mines are disadvantaged by longer haul lengths compared to other mines in the Hunter Valley and in other Australian coal mining regions. This impacts both above rail costs and below rail costs, particularly in the absence of a ‘distance taper’ which is a feature of below rail pricing in other regimes (see Section 2.6). A comparison of haul lengths is provided in Figure 2 below.

Figure 2 – Coal Mine Haul Lengths



Note: Estimated haul length based on approximate network point of coal train origin / destination less allowance for network distance at port of ~160km.

Source: 2014-2023 Hunter Valley Corridor Capacity Strategy – Consultation Draft, June 2014. Queensland Rail’s Submission to the Productivity Commission’s Black Coal Industry Inquiry (1999).

11. Gunnedah Basin mines are also disadvantaged by:

- Higher charges per gross tonne kilometre in Zone 3 than in Zone 1;
- Higher charges within Zone 1 due to inability to use the Zone 1 indicative service; and
- Higher above rail costs due to payload limitations, and the need for ‘banking’, both of which arise from characteristics of the Zone 3 network.

2.3. Pricing principles set out in the HVAU

12. Access pricing principles are set out in Section 4 of the HVAU in relation to a wide range of factors. This consideration has been focused on those sections of most relevant to the revenue allocation review. Sections 4.2 and 4.3 of the HVAU require

ARTC to set charges for below rail access to its Hunter Valley network such that revenue falls between two standard regulatory limits, i.e. revenue:

- Must at least meet the direct costs imposed by the user or access holder (the floor test); and
 - Must not exceed the full economic costs of providing the service (the ceiling test).
13. The revenue limits work to ensure that all users pay at least the direct costs they impose on the system (i.e. prices are free of cross-subsidy) and are no higher than the full economic cost of the relevant services, including a reasonable risk-adjusted return on capital (i.e. prices are free of monopoly rents). The ceiling test applies to each user and to combinations of users (the so called combinatorial ceiling test).
 14. ARTC segments the Hunter Valley below rail network for pricing and revenue purposes into three pricing zones (PZ), comprising: PZ1 (Newcastle Port to Muswellbrook), PZ2 (Ulan line) and PZ3 (Gunnedah line). The shared network in PZ1 is utilised by both PZ2 and PZ3 users.
 15. At present, the ceiling test is a binding constraint on access revenues from PZ1 and PZ2 (the constrained network) whereas revenues from PZ3, at present volumes, are insufficient to meet the ceiling test (the unconstrained network).
 16. Sections 4.4 to 4.12 of the HVAU set out the mechanisms and approaches to a number of factors including the specification of the regulatory asset base, definition of economic cost, cost allocation approach, depreciation calculation, rate of return, unders and overs accounting, compliance assessment and the structure of charges.
 17. Section 4.13 of the HVAU sets out the pricing objectives having regard to variable, fixed and capital cost components. In summary, the objectives require:
 - Full recovery of variable costs to reflect actual network usage;
 - Maximum recovery of fixed and capital costs;
 - Application of a take or pay component to fully recover capital costs over the economic life of new investments and some or all fixed costs;
 - The proportion of fixed costs recovered to be applied consistently within a pricing zone; and
 - An open and equitable mechanism for the application of take or pay charges.
 18. Section 4.15 sets out the principles on which the HVAU permits charge differentiation regarding optimising use of the network and optimising Coal Chain Capacity. However section 4.16 also limits the extent to which differentiation will apply, precluding differentiation on the basis of the identity of the applicant or whether it is a Government authority and if the characteristics of the access rights being sought are alike, they operate within the same end-market and on the basis of the marginal cost of production of the mines.
 19. Sections 4.17 to 4.20 set out the approach to determining initial and final indicative train service specifications and related access charges.

2.4. ARTC pricing approach

Current pricing practice

20. The current approach to pricing by ARTC in the Hunter Valley is complex and much of the analysis in support of it is confidential. Available information suggests price setting involves a three step process:

- (i) Charges are levied for each pricing zone comprising a variable component to cover a user's direct costs and a fixed charge to cover common costs. For the shared network charges are intended to cover both variable and fixed costs attributed to PZ1, PZ2 and PZ3 users through their combined use of PZ1. The charges are set out in Table 1 below.

Table 1 – Access Charges in the Hunter Valley Network, 2014 (\$/kgtkm)

Type of Charge	Pricing Zone 1	Pricing Zone 2	Pricing Zone 3
Variable (\$/kgtkm)	0.909	2.632	1.496
Fixed (\$/kgtkm)	9.893	8.298	9.635
Service Characteristics ²	<ul style="list-style-type: none"> ▪ 30 tonne axle load ▪ 60 km/h (loaded) ▪ 80 km/h (empty) ▪ 96 wagons ▪ 1,543 metres 	<ul style="list-style-type: none"> ▪ 30 tonne axle load ▪ 60 km/h (loaded) ▪ 80 km/h (empty) ▪ 96 wagons ▪ 1,543 metres 	<ul style="list-style-type: none"> ▪ 25 tonne axle load ▪ 80 km/h (loaded) ▪ 80 km/h (empty) ▪ 82 wagons ▪ 1,350 metres

Source: ARTC <<http://www.artc.com.au/Content.aspx?p=229>>

- (i) A resettlement process is undertaken which reallocates revenue between segments. This lowers the contribution to the shared network by PZ3 users and limits the extent of under-recovery in PZ3, while ensuring all users pay at least their direct costs for each haul.
- (ii) Revenue is then reconciled to determine the shortfall or surplus in each pricing zone. Prices charged to access seekers are adjusted to offset the shortfall or surplus.

Gunnedah Basin producers pay more per tonne and per tonne kilometre

21. Under the current pricing arrangements, Gunnedah Basin mines pay more on a dollars per tonne and dollars per tonne kilometre basis than PZ1 and PZ2 mines. As an example, using a reference haul length and train configuration for each pricing zone and published ARTC tariffs³, costs per net tonne and per net tonne kilometre are presented in Table 2 below.

22. Costs per net tonne (from Table 2) are:

² Based on the Initial Indicative Service

³ Standard tariffs from the HVAU were converted to a cost per gross tonne for the reference haul lengths. An assessment was made of the gross/tare weight of a reference train configuration to determine the proportion of the round-trip cost paid which is attributable to the payload (i.e. the coal). The gross/tare proportion for a round trip was developed by considering a fully-loaded train in the Initial Indicative Service Configuration travelling from load point to Port and returning empty. The gross and tare weights of the locomotive and wagons were determined based on data published in the ACCC Position Paper: ARTC's Hunter Valley Coal Network Access Undertaking Final Indicative Services Variation.

- (i) 32% lower for PZ2 producers than PZ3 producers; and
- (ii) 74% lower for PZ1 producers than PZ3 producers.

23. PZ3 users also pay a higher price per net tonne kilometre, albeit the difference between the pricing zones in this instance is less pronounced. Costs per net tonne kilometre are:

- (i) 4% lower for PZ1 producers than PZ3 producers; and
- (ii) 2% lower for PZ2 producers than PZ3 producers.

Table 2 – Example tariffs for a reference service in each pricing zone

Pricing Zone	Reference Load Point	Reference Haul Length	HVAU Tariff	Calculated Cost per Net Tonne	Calculated Cost per Net Tonne Kilometre
		km	\$/'000 GTK	\$/NT	c/NTK
1	Ravensworth	101	10.802	1.56	1.55
2	Mangoola	261	10.930	4.08	1.57
3	Narrabri	372	11.131	5.97	1.60

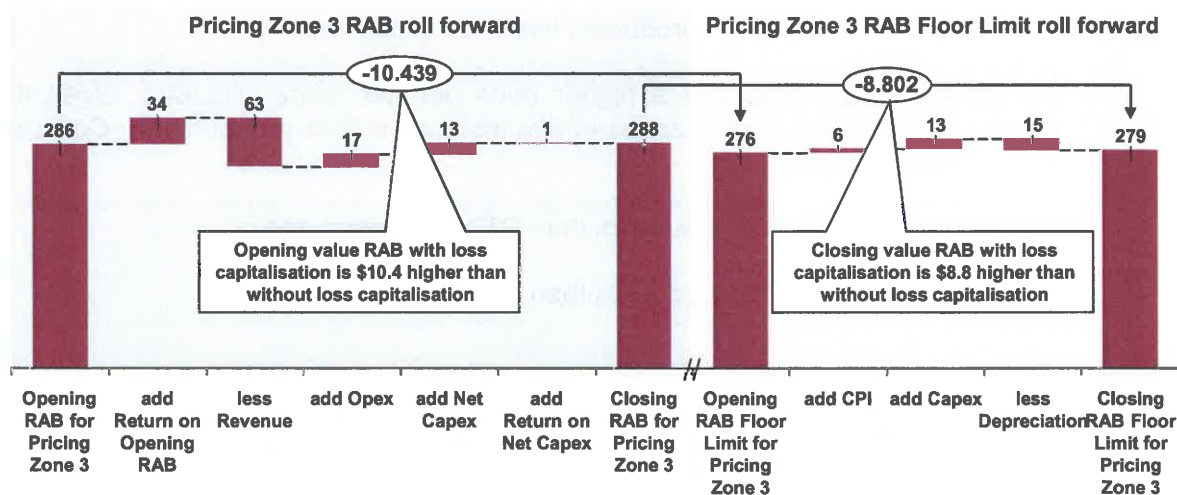
Source: Strategy& analysis of ARTC data.

Loss Capitalisation

24. A financial framework known as *Loss Capitalisation* is applied in PZ3 instead of the unders and overs arrangement used in PZ1 and PZ2. Loss Capitalisation allows ARTC to capitalise any annual revenue shortfall in PZ3 into the regulatory asset base for possible recovery in future years. This provides ARTC with an opportunity to recover, over time, the full economic costs of its Hunter Valley network. Whether ARTC will actually recover all capitalised losses depends on a range of factors. It is understood ARTC's willingness to capitalise losses has been based on an expectation of growing demand within PZ3, an expectation which is being realised under current pricing arrangements.

25. Two RABs are maintained, one with loss capitalisation (the RAB) and the other without (the RAB Floor Limit). In 2013 ~\$1.6 million of capitalised losses were recovered, reducing total loss capitalisation from \$10.4m to \$8.8m. The movement in each of the regulatory asset bases, with and without loss capitalisation, is illustrated in Figure 3 below.

Figure 3 – Movement in the Regulatory Base With and Without Loss Capitalisation



Note: Example is shown for 2013.

Source: ACCC, Consultation Paper, Australian Rail Track Corporation's compliance with the financial model and pricing principles in the Hunter Valley Coal Network Access Undertaking for 2013.

Historical pricing practice

26. ARTC's submission to this review demonstrates that the treatment of constrained and unconstrained mines in the Hunter Valley is a longstanding feature of rail access regulation under both the NSWRAU and the HVAU. Aspects of the ARTC's pricing practices reflect long standing practice in the Hunter Valley dating back to the 1999 IPART approved access undertaking. Importantly, pricing practices were not automatically imported from the IPART undertaking to the HVAU, as is demonstrated by the discontinuation of the 'cusp' approach. In contrast, the revenue allocation process applied to constrained and unconstrained mines under the HVAU, an undertaking developed through extensive consultation, was consistent with the approach applied under the IPART undertaking, with changes only made to improve transparency or promote efficiency.⁴

27. The approach has also been used to support the development of mines on the Ulan line. Prior to 2007-08 mines in PZ2 made no contribution to PZ1 fixed costs, i.e. they paid only their direct costs. From 2007-08 to 2013 as mine viability and export volumes increased PZ2 producers began to contribute to the PZ1 fixed network costs with the contribution increasing over time.

28. The current treatment of PZ3 producers in this revenue allocation review is the same as occurred for PZ2 producers prior to 2007-08. As ARTC note: "some of the mines that are in the Constrained Group of Mines were formerly unconstrained mines and mines that are currently unconstrained can be expected to become constrained in future, assuming the Hunter Valley coal network continues to grow and develop."⁵

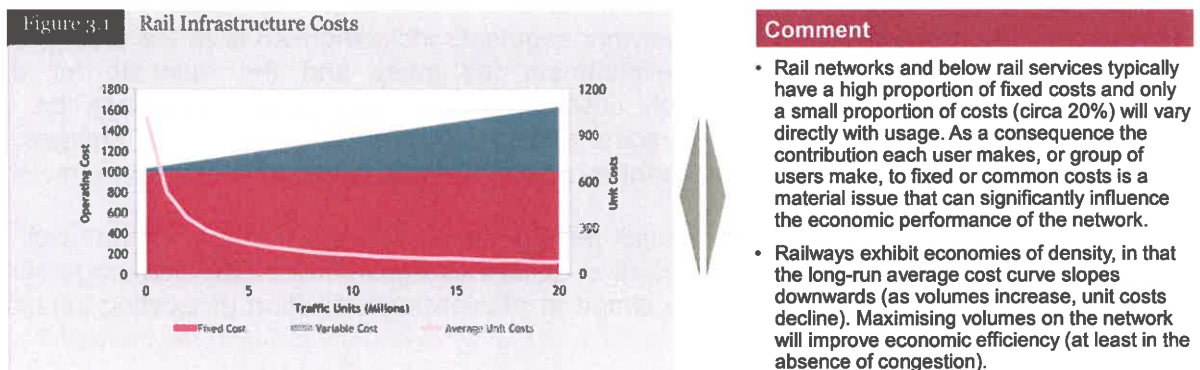
⁴ ARTC, Revenue Allocation Review ARTC Submission to ACCC Discussion Paper, August 2014.

⁵ ARTC, Revenue Allocation Review ARTC Submission to ACCC Discussion Paper, August 2014.

2.5. Economically efficient prices for below rail access

29. Any amendment or variation to the current access arrangements should be assessed having regard to whether they are efficient. Efficiency is a significant component of the Objects of the Competition and Consumer Act (Part IIIA) which is to “promote economically efficient operation of, use of and investment in the infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream market”. Similar objectives regarding increasing competition and ensuring efficient use of resources are reflected in Section 1.2 of the Hunter Valley Access Undertaking.
30. Achieving and maintaining economic efficiency is consistent with a range of benefits to stakeholders; railway owners receive competitive returns, producers pay prices that reflect an efficient competitive market and incentives are provided for on-going investment in railway assets and capacity.
31. Maximising volume and throughput in the Hunter Valley Coal Chain will also allow the mining industry (and the broader economy) to capture the economic surplus associated with expanding coal production and export. These impacts are likely to include increased turnover, economic value add, additional income and jobs to the Hunter Valley region.
32. There are two characteristics of below rail infrastructure that impact the economic efficiency associated with that infrastructure: the high proportion of fixed costs and the downward sloping average cost curve, as illustrated in Figure 4 below.

Figure 4 – Rail Infrastructure Cost Characteristics



Source: Strategy& analysis, PPIAF, Railway Reform: Toolkit for Improving Rail Sector Performance p34.

33. Considering the high proportion of fixed costs for below rail services, as volumes increase the total cost per unit of throughput will decline to the benefit of all users of the network.⁶ As a consequence, economic efficiency will generally be enhanced where total volumes on the network are maximised.

⁶ The principle that higher volumes and network utilisation are better than lower volumes is true up to the point at which capacity is outstripped by demand at the prevailing price. Following investment in capacity the rule that higher volumes are better will again apply. See for example PPIAF, Railway Reform: Toolkit for Improving Rail Sector Performance p34.

34. Generally prices should be set to recover the full economic cost of providing the relevant infrastructure and in a way that maximises utilisation of the network. In order to avoid any cross-subsidies, each user should pay at least the incremental cost of their use of the network. However how other joint and common costs are recovered from users is a matter of contention and a central consideration in the revenue allocation discussion.
35. In principle, joint and common costs should be recovered from users in a way which minimises any distortion in consumption decisions, thereby maximising volumes and utilisation of the infrastructure. Price discrimination having regard to users' capacity to pay access charges may therefore aid economic efficiency. Indeed regulators would typically support discriminatory pricing between users to the extent it encouraged efficient use of the rail network.
36. In the context of the Hunter Valley coal network, there is significant flexibility to set individual prices within the regulatory floor and ceiling limits. In that respect ARTC clearly differentiates between coal and non-coal users of its Hunter Valley network (setting lower prices for the latter) but has limited its differentiation between coal users other than in recognition of capacity to pay.
37. ARTC state that the essence of the pricing approach used is price differentiation between constrained and unconstrained pricing zones and that it is consistent with economic efficiency and the Objects of the CCA as it is driven by variation in capacity to pay. ARTC also state that users in the constrained zones make a higher contribution to common costs in the constrained zones than users in the unconstrained zones. However over time, as volumes in an unconstrained pricing zone grow, the contribution to common costs made by those users will increase.⁷ PZ3 pricing already includes a proportion of ARTC overhead allocation which benefits constrained users.
38. Once revenue for all network segments including PZ3 is at the ceiling, arguments in favour of industry development fall away and the rationale for differentiated application of common costs weakens. That said, there may be a case for maintaining over time some sort of distance taper⁸ in access charges to assist in offsetting longer haul lengths, where doing so would enhance economic efficiency.
39. In addition to differential pricing aimed at maximising volume and use of the infrastructure, the structure of access charges should also encourage efficient use of available infrastructure aimed at maximising utilisation of existing infrastructure and efficient investment.
40. When it assessed ARTC's proposed rail access undertaking, the ACCC listed a number of principles it considers important in establishing an economically efficient regime, which included⁹:

⁷ ARTC, Revenue Allocation Review ARTC Submission to ACCC Discussion Paper, August 2014, p10.

⁸ A distance taper is where the average cost per gross tonne kilometre declines as haul length increases. The distance taper in effect compensates for the distance disadvantage of longer haul mines.

⁹ Productivity Commission, Inquiry Report: Road and Rail Freight Infrastructure Pricing, December 2006, pE.3.

- Access prices should provide the ARTC with incentives to provide services at efficient levels of cost and quality and to undertake efficient investment.
 - Access prices should provide incentives for efficient use of rail track infrastructure.
41. Arguably PZ3 user charges in PZ1 should increase as capacity becomes constrained in order to ration capacity and encourage efficient use and efficient investment. However even if PZ3 users continue to make a lower contribution to common costs in PZ1 as capacity becomes scarce, proper application of the ceiling test should prevent PZ1 and PZ2 users paying more than the full economic cost of the infrastructure required to meet their needs on a stand-alone basis (without PZ3 volumes).
42. Nevertheless, the structure of access charges should provide effective price signals to users regarding the efficient use of the rail network and encouraging efficient train configurations will be relevant to the efficient use of existing infrastructure and encouraging efficient investment.

Final Indicative Service

43. A process has been underway to establish an efficient reference train configuration for the Hunter Valley coal network (the Indicative Service). The Indicative Service is the reference train configuration in respect of train length, train speed and axle load, that best optimises the efficient utilisation of the rail network and coal chain capacity.
44. Configurations which differ from the Indicative Service will attract different charges, reflecting the impact use of a non-indicative service has on coal chain capacity. After various interim assessments, a Final Indicative Service based on advanced HVCCC modelling has been developed and is currently being considered by the ACCC and stakeholders.
45. Relevant to this discussion, it is proposed that the allocation of joint and common costs in PZ1 is structured to reflect relative consumption of capacity of different train configurations. Users from PZ3 that operate trains smaller than the Indicative Service will be allocated a relatively higher share of joint and common costs (per gross tonne kilometre) to reflect the opportunity cost of their relatively inefficient use of capacity. The effectiveness of this price signal is not diminished by the reallocation of revenue to Zone 3, because decisions regarding investment in rolling-stock are necessarily long term, and will have implications well beyond the period for which this reallocation is expected to apply.
46. Providing a price signal through the Indicative Service is not incompatible with the previous discussion of structuring differential charges to maximise export volumes and use of the network. Price signalling is useful in encouraging efficient use of existing infrastructure but only effective if users can change behaviour in response to those price signals. An overarching consideration however is how much each user is charged to transport their coal from mine to port and capacity to pay issues remain relevant to maximising volume and throughput in the coal chain Hunter Valley.

Other Efficiency Considerations

47. Contrary to assertions by other submissions to the ACCC review, there appears no evidence that ARTC's pricing is cross subsidising between regions. Differential pricing, even within the same end market of export coal haulage, does not constitute cross subsidisation provided each user meets the incremental costs they impose on the shared networks. Indeed, Gunnedah Basin mines pay more on a dollars per tonne and dollars per tonne kilometre basis than PZ1 and PZ2 mines.
48. It has also been suggested that the revenue ceiling test should be applied to each pricing zone rather than on a mine to port basis. ARTC applies the ceiling test such that access revenue, over the traffic's journey, must be no more than the economic cost of all segments required for the journey on a standalone basis. In addition, the test applied by ARTC is combinatorial, which means that the test must hold true for each combination of network traffics on a stand-alone basis. However regulatory practice under a constrained market pricing approach supports calculating the standalone cost of the mine to port service, rather than calculating the standalone cost of a number of network segments separately.¹⁰

2.6. Precedent in other jurisdictions

49. General regulatory practice supports the use of differential pricing to meet economic efficiency objectives as evidenced by commentary from the Productivity Commission. There is also evidence of its application in the bulk rail freight haulage sector to support developing growth areas and to reduce the distance disadvantage of haul length.

Productivity Commission

50. The Productivity Commission has opined that infrastructure users should pay for the total costs of providing efficient infrastructure, with those charges structured to minimise distortion of consumption choices.¹¹ In Finding 3.4 of the Inquiry Report No. 41 the Productivity Commission makes this observation:

Prices set to recover each mode's total costs, reflecting Ramsey pricing principles to the extent possible, have the potential to promote efficient use of road and rail freight infrastructure, as well as meeting a self-financing requirement.

More specifically, while users should be required to cover at least the attributable costs of their infrastructure use, their contribution to (unattributable) fixed or common costs should be inversely related to the price responsiveness of their demand for the services provided, so as to minimise efficiency losses from discouraged consumption.

51. The Productivity Commission's comment reflects a relatively pure theoretical approach that relies on Ramsey pricing principles. These principles are an extension of the more general approach taken in economic regulation that supports setting prices according to a user's capacity to pay. The Commission notes that practical application is likely to be impeded by the information requirements and could, in some instances, lead to inequitable outcomes. This is particularly because users with lower

¹⁰ See for example Baumol and Willig, Competitive Rail Regulation Rules Should Price Ceilings Constrain Final Products or Inputs?, Journal of Transport Economics and Policy, Volume 33, Part 1, pp43-54.

¹¹ Productivity Commission, Road and Rail Freight Infrastructure Pricing – PC Inquiry Report No.41, 22 December 2006. p.492

price sensitivity (and often fewer alternatives) would be required to pay proportionately more.

52. Nevertheless the economic efficiency implications are an important consideration in the context of the Hunter Valley Coal Chain; ensuring access seekers meet their own direct costs, while common costs are allocated according to capacity to pay is an economically efficient approach to cover total infrastructure costs.

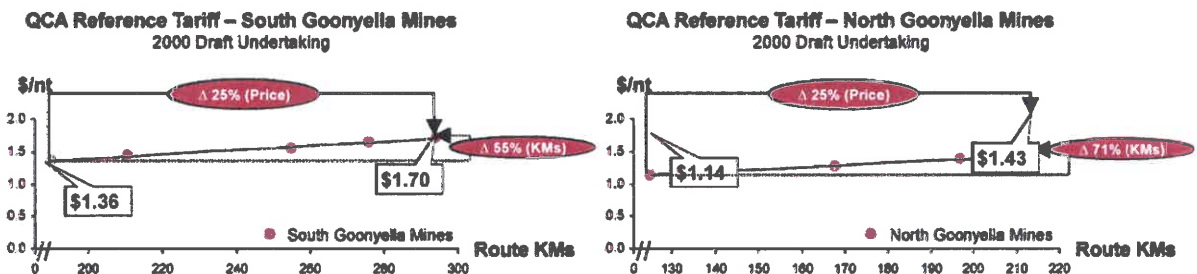
Queensland

53. Historically the Queensland Competition Authority (QCA) has recognised that there may be an advantage to allocating common or unassignable costs to mines closer to the coast relative to mines further from the coast, subject to each user covering the costs of their incremental use of the system. The QCA has identified the advantages to the State of increasing the attractiveness of mines with longer haul lengths, as their development and output will enhance the overall productivity of the Queensland mining industry.¹²

There may be an advantage to the State as a whole if a relatively higher proportion of charges that cannot be assigned on any cost causation basis to any user is attributed to mines closer to the coast relative to mines further from the coast. However, this approach would be subject to every user and every cluster of users covering the costs associated with its or their (as the case may be) incremental use of the system, including the costs of the infrastructure used exclusively by that user or cluster. The advantage to the State arises from the prospect of such an approach increasing the attractiveness of mines remote from the coast, enhancing their prospects for development and increasing the output of the Queensland mining industry.

54. In all generations of Queensland Rail and Aurizon Network access undertakings, as kilometres travelled increases, price increases at a decreasing rate – a pricing approach consistent with a distance taper.¹³ In the 2000 Draft Access Undertaking there was a clear intention from Queensland Rail to apply a distance taper, as shown in Figure 5 – below.

Figure 5 – QR Reference Tariffs Approved by QCA (2000 Draft Access Undertaking)



Source: Strategy& analysis, QCA – Draft Decision on QR’s Draft Undertaking Vol. 3, Dec. 2000.

55. Figure 5 – depicts the relationship between the early 2000’s reference tariff and haulage lengths from mine to port. It shows that the increase in lengths was not

¹² Queensland Competition Authority, Issues Paper, Queensland Rail’s Draft Access Undertaking – Reference Tariffs, Reference Train Services and Rate Regulation, October 1999, p21.

¹³ Queensland Competition Authority, Draft Decision on QR’s Draft Undertaking, Volume 3 – Reference Tariffs, December 2000.

matched by a commensurate increase in price per net tonne (i.e. a distance taper applied). For the South Goonyella cluster, a 55% increase in haulage lengths resulted in only a 25% increase in cost per net tonne. Similarly in North Goonyella, a 71% increase in haulage lengths resulted in a 25% increase in cost per net tonne.

56. Current pricing within the Central Queensland Coal Network (and proposed pricing under “UT4”) includes multi-part below rail access tariffs, a number of components of which do not vary with distance. This delivers a distance taper in the rate. As an example, in the Blackwater Cluster when haul lengths increase by 50% the cost per net tonne increases by only 13% as illustrated in Figure 7. A similar effect is seen in other mine clusters, as all clusters operate under the same pricing principles. The key elements driving the distance taper in this instance are the two pricing components (AT2, which is ‘per path’ and AT4, which is ‘per tonne’) that do not increase with distance. Aurizon Network, under its draft 2014 undertaking, has proposed to shift a larger proportion of its revenue recovery into AT2, a change which will strengthen the distance taper to the benefit of more distant mines, relative to shorter haul mines.

Figure 6 – Illustrative Below Rail Cost per Net Tonne by Indicative Haul Length, Blackwater System



Source: Strategy& analysis, Aurizon, ARTC, QR Network’s Access Undertaking.

57. Distance tapers are a common feature of rail regulation and are consistent with cost reflective rail pricing, i.e. there is a natural distance taper to costs in a below rail system. However PZ3 users currently pay more per net tonne kilometre than those in PZ1 and PZ2. ARTC note that “The unit cost of access for Gunnedah Basin mines is currently around 20% higher on a cents per net tonne kilometre basis.”¹⁴

¹⁴ ARTC, Revenue Allocation Review ARTC Submission to ACCC Discussion Paper, August 2014, p15.

Rolleston Pricing Example

58. Coal is transported from the Rolleston mine to the Port of Gladstone. The total haul length is approximately 424km including a 109km connection to the Blackwater Rail System. An analogy could be drawn between rail access pricing for Rolleston and PZ3 producers as both use a section of dedicated infrastructure before joining a more highly utilised shared network. In the QCA's 2011-12 Annual Review of Reference Tariffs it was explained that: *"a number of loading points would not meet their spur costs plus the minimum contribution to the system's common costs on the basis of the system reference tariff. These loading points have their own reference tariff (i.e. Minerva, Rolleston and Vermont) based on their incremental costs plus the minimum contribution to the common costs of the remainder of the network."*¹⁵

Western Australia

59. Section 47(1) of the West Australian Rail (Access) Code, 2000 requires each railway owner to submit to the regulator for approval a statement of rules that are to apply where breaches of the ceiling price test occur, the so called Over Payment Rules. The Pilbara Infrastructure's (TPI) rules, which were approved by the regulator, state, inter-alia¹⁶:

- As Total Costs are allocated on a Route Section basis, it is necessary to distribute Access Revenue earned over a particular route to individual Route Sections.
- This will be done in accordance with the following rules:
 - Access Revenue derived from a Route can only be allocated to the Route Sections on that Route. However this does not mean that Access Revenue must be allocated to the route sections from which it was derived.

TPI will allocate Access Revenue to cover the costs attributed to the applicable Route Section in the following order:

- Incremental Costs against all applicable Route Sections;
 - Up to the Ceiling on all applicable branch or feeder (dedicated) Route Sections; and
 - Up to the Ceiling on all applicable shared Route Sections.
60. TPI states the justification for the ordering of the allocation process is based on economic principles. First to avoid cross subsidisation between route sections, revenue allocated to each line section must at least cover the incremental cost. Second, recovery of capital costs on branch or feeder lines ranks ahead of shared lines on the basis that there is no other traffic on these lines to fund the dedicated infrastructure and unless the costs are covered the lines may close. It is also noted that where TPI and the Operators have reached agreement to a different Access

¹⁵ QCA, QR Network 2011-12 Volume Reset and Annual Variation of Reference Tariffs Summary of QR Network's Application and the Authority's Assessment, p8.

¹⁶ Virtually the same rules and associated rationale is in place for Over Payment Rules for The Pilbara Infrastructure as identified in The Pilbara Infrastructure Railways (Access) Code 2000 Overpayment Rules, March 2013 and other entities such as the PTA of WA, Over Payment Rules, 1 Jan 2004.

Revenue allocation arrangement in an Access Agreement that arrangement would prevail.

61. This revenue allocation approach is also reflected in the approach taken by the Economic Regulation Authority Western Australia that revenue should be allocated according to a rank order that:

- Allocates to each access seeker the direct cost for their use of a sector;
- Allocates to an access seeker using a dedicated sector the common costs for that sector; and
- Divides between the access seekers using a shared sector the common costs for that sector.

2.7. Investment to improve system capacity

62. Gunnedah Basin mines are underwriting investment to improve system capacity for the benefit of all users. Recently Idemitsu/Whitehaven agreed that \$150 million¹⁷ of costs should be included in the RAB to cover the cost of investment to increase the Gunnedah line to 30 tonne axle loads. As a result capacity benefits will propagate throughout the network through increased volume per path, including on the shared network. Whitehaven estimates that the 30 tonne axle load project has provided significant capacity improvement through the congested section of the network between Hexham and the port.

¹⁷ Whitehaven email correspondence.

3. Review of the current revenue allocation approach

63. The discussion above raises a number of contextual issues relevant to the ARTC's current revenue allocation approach:

- There is potential for significant growth in the Gunnedah Basin – a compound annual growth rate of over 25% in the next 6 years is possible, subject to project economics and export volume demand;
- The new mines are at a significant distance disadvantage compared to existing mines (an average haul length of 312 kms compared to an average of 171 kms elsewhere across the Hunter Valley);
- At present the regulatory ceiling test is a constraint on revenues in the PZ1 and PZ2 pricing zones but not in PZ3 at present volumes; and
- Gunnedah Basin producers pay more per tonne and per tonne kilometre than other producers in PZ1 and PZ2. In contrast to the normal distance taper approach, the average price per tonne kilometre of PZ3 mines actually increases with distance.¹⁸

3.1. Benefits of the current approach

64. Having regard to the contextual issues, the current revenue allocation approach delivers a number of economically beneficial outcomes:

- Supporting developing coal regions is consistent with economic efficiency, public interest and historical precedent;
- Encouraging growth reduces asset stranding risk; and
- Efficient investment is being encouraged.

65. These outcomes also demonstrate alignment with the objects of the Competition and Consumer Act (s44AA(a)) to promote the economically efficient operation of, use of and investment in the infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets.

Supporting developing coal regions is consistent with economic efficiency and historical precedent

66. Economically efficient access pricing would support differential pricing between pricing zones to the extent it encouraged growth and facilitated throughput and encouraged efficient investment. Growth prospects in the Gunnedah Basin are strong and the Gunnedah Basin mines already pay higher costs per tonne and per tonne kilometre than other producers in the Hunter Valley.

67. The distance disadvantage of Gunnedah Basin mines is significant, and would be worsened in the event that ARTC chose to increase prices within PZ3 – a risk which would increase in the event that ARTC ceases to apply the traditional approach to revenue allocation. It is clear the revenue allocation approach is a vital part of the

¹⁸ ARTC, Revenue Allocation Review ARTC Submission to ACCC Discussion Paper, August 2014, p15.

existing regulatory package. To the extent that this element of the package is altered, a review of all elements, including the tariff structure and the lack of a distance taper, would be required.

68. Continuing to support growth in the Gunnedah Basin by setting charges at affordable levels is consistent with past practices in respect of the Ulan line. That is, the approach is using a proven mechanism that has been successfully applied in the past. Over time it allows all users and the broader community to benefit from lower average rail haulage costs and the growth in economic activity associated with expansion in export coal volumes.
69. The use of such arrangements is not only promoting industry development. It is also supporting competition in related (downstream) markets such as above rail haulage markets.

Encouraging growth reduces asset stranding risk

70. Arguably, it is in the interests of all producers to encourage growth in developing coal areas so as to replace volumes from existing mines as they are depleted and to continue to maintain and expand infrastructure to meet market needs. Coal infrastructure assets have long economic lives and failure to invest in prospective capacity to replace existing mining capacity could create higher asset stranding risks and higher costs for all existing producers.

Efficient investment is being encouraged

71. Work on establishing the Final Indicative Service has increased transparency on efficient train configurations across the network and the current investment framework is encouraging efficient investment as evidenced by the decisions by Gunnedah Basin producers to underwrite investments in upgrading the PZ3 network to allow bigger trains to operate into the PZ1 network, creating benefit for all users.
72. While encouraging efficient use of available capacity is an important aspect of economic efficiency, continuing to manage the total cost of rail haulage for developing regions like the Gunnedah Basin is critical to ensuring those producers maintain capacity to underwrite efficient investments into the future.

3.2. Potential improvements

73. ARTC's present pricing practices appear to be consistent with the approved HVAU. On the grounds that ARTC are not in contravention of the combinatorial ceiling test there is no justification for large scale change mid-way through the regulatory period via the ACCC's compliance review. To do so would introduce an unacceptable degree of regulatory risk for investments made under the present undertaking that is based on over a decade of regulatory precedent.
74. That said, some refinements to the current process could create benefits from additional certainty and transparency. The two areas of focus are:
 - Revenue allocation and reconciliation; and
 - Loss capitalisation.

Revenue allocation and reconciliation

75. Rather than adopt an end of year reconciliation process, structuring differential charges up-front may provide greater certainty and clarity for all users. For instance, PZ3 users would pay a charge that reflects only their direct costs for use of the PZ1 network with no reconciliation of common costs between regions, i.e. different prices will be set for PZ3 users and other users for PZ1.
76. An annual reconciliation process may still be applied to reconcile differences in actual usage and forecast usage, but the fluctuations would be relatively small. PZ1 and PZ2 users would pay charges that reflected their expected actual charges rather than be asked to top up a revenue short-fall at the end of the year.

Loss capitalisation and revenue reallocation

77. The market should be provided clear signals as to how capitalised losses will be recovered over time, and forecasts of the amount of revenue reallocation into future years assuming PZ3 export volumes continue to grow. This will provide greater certainty for users on how access charges are likely to move over time.

