

Submission To The ACCC

In Response To The Draft Determination Regarding

ARTC 2013 Compliance Assessment

January 2016

ARTC



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1 Executive Summary

This submission is made by the Australian Rail Track Corporation (**ARTC**) in response to the Draft Determination published by the Australian Competition & Consumer Commission (**ACCC**) on 30 October 2015 in relation to an assessment of compliance by ARTC with the 2011 Hunter Valley Coal Network Access Undertaking (**2011 HVAU**) for the 2013 calendar year.

The Draft Determination approved a number of aspects of ARTC's compliance submission, with some matters subject to the provision of further information.

The material change in the existing application of the regime settings is the inclusion of the incremental costs of capacity in the Constrained Network for Access Holders with hauls originating in Pricing Zone (**PZ**) 3 to establish the relevant economic cost for the existing Constrained Network users. The ACCC engaged consultant WIK to evaluate the incremental costs of PZ 3 originating traffics to be deducted from the full economic cost of the Constrained Network to determine the stand alone costs of those Users that have hauls that operate wholly within in the Constrained Network.

In previous submissions ARTC has raised objections to the ACCC's change in approach. ARTC remains of the view that the approach adopted in its 2013 submission is in compliance with the 2011 HVAU, consistent with previous regulatory decisions and was understood by the ACCC in approving the 2011 HVAU.

ARTC's primary concern continues to be that the draft decision is contrary to a fundamental objective which underpins our rationale for seeking to establish long-term voluntary undertakings with the ACCC. That objective is to deliver regulatory and commercial certainty to ARTC and our customers for the term of an undertaking and as such we believe that the optimal timeframe for implementing a change of this nature would be from the commencement of the 2016 Hunter Valley Access Undertaking (**2016 HVAU**). This submission highlights ARTC's continued strong concerns with the ACCC seeking to impose this change mid-way through the life of the 2011 HVAU.

In this submission ARTC has not sought to reproduce the arguments previously provided, however, that should not be interpreted as a change in ARTC's position. The focus of this submission is to address the WIK analysis which is fundamental to the ACCC determination. It should be noted that for a substantial period of time PZ 2 users benefitted from only paying Direct Costs in PZ 1 while their volumes were on a growth trajectory.

The analysis provided by WIK results in an allocation of incremental costs to PZ 3 Access Holders of \$14.6m. The analysis relies largely on the inclusion of the majority of major capital projects since 2008, accounting for \$11.6m (79%) of the total.

ARTC acknowledges the extension in time provided by the ACCC to respond to the Draft Decision, which has allowed us to undertake analysis on the WIK report. ARTC sought to actively support the WIK review and provided detailed documentation as requested by WIK as part of their consultancy. The provision of documentation was the only input sought by WIK to support their review beyond a brief introductory teleconference.

Given the limited input into the review, ARTC has engaged engineering consultant E3 Advisory to provide an independent assessment of the allocation of costs that should be apportioned as incremental using the ACCC's interpretation of the 2011 HVAU. E3 Advisory have considered the same elements of costs studied by WIK and applied their extensive engineering and Australian heavy haul rail network experience in the development of an alternative set of incremental

allocations underpinned by additional commentary to support their conclusion. E3 Advisory also actively engaged with ARTC's engineering, operational and capacity modelling resources to assist them in formulating their final position.

ARTC identified a number of specific areas in the WIK analysis that it sought separate advice from E3 Advisory. These include:

- An assessment of which major projects in PZ 1 can be considered as incremental to PZ 3 users through an examination of the initial approval and justification for the project. The WIK approach appears to ignore the basis for constructing the project and fails to consider the complexity and interrelated nature of elements of the Hunter Valley Coal Chain.
- Consideration of how best to quantify any costs that could be considered incremental. The WIK methodology appears to include the capital charge related to the entire cost of the project averaged over actual usage. This approach does not recognise the extent to which users require the project and is inconsistent with the basis on which capacity in the Hunter Valley is contracted.
- A review of the WIK cost allocation for maintenance activities which appears to be primarily a desk-top analysis with limited rationale for the fixed and variable weighting identified by WIK. The current cost allocations have been applied consistently by ARTC for approximately ten years in the Hunter Valley Coal Network and have been previously verified by an IPART initiated review.

The E3 Advisory analysis provides an alternate method to assessing these costs that is explained in detail in this submission and the attached report.

The core finding of E3 Advisory is that the incremental cost that could be allocated to PZ 3 in 2013 is an amount of \$3.6m. This is significantly less than the \$14.6m identified in the WIK report and greater than ARTC's original assessment of Direct Costs at \$2.5m.

The primary explanation for the variance relates to the consideration of major capital projects committed prior to the commencement of the HVAU. The E3 Advisory analysis excludes, or significantly reduces the impact of, a number of projects that were approved on the basis of benefits or volume growth unrelated to PZ 3.

The three projects for the construction of the third road from Maitland to Minimbah and the Nundah Bank alone contributed 56% of the increase calculated by WIK. These projects were approved prior to there being significant contracted volume growth requests in PZ 3.

ARTC expects that adoption of the approach recommended by E3 Advisory would result in an increase to a calculated incremental cost in 2014 and 2015. This is due to PZ 3 growth volumes becoming a greater component of the justification for projects commissioned during these compliance periods.

ARTC believes that E3 Advisory's more detailed evaluations will be valuable to the ACCC and Access Holders in understanding the complexity of the issue surrounding the identification of costs as incremental rather than fixed. The E3 Advisory analysis highlights the complexity of allocating portions of capacity development and usage in a mixed modal system with a number of factors that result in demand and supply being variable and uncertain; particularly where investment decisions are made in the light of circumstances and expectations applicable at the time that may later change.

Apart from consideration of major capital projects, the E3 Advisory report also provides a detailed, independent analysis of the WIK methodology and percentage allocations. If the ACCC's approach

is to be adopted, ARTC strongly believes that this analysis provides a compelling position as to how incremental costs should be developed for the accuracy, transparency and certainty in application of the regulatory regime for all users.

To enable a consistent approach to the determination and allocation of incremental costs, both for past decisions and into the future, ARTC's suggested approach, informed by E3 Advisory, is to recognise the temporal sequence of capacity development having regard to Access Holders current and prospective contractual positions (at the time of the investment decision), rather than actual Train Km or GTK in each compliance period.

The methodology suggested by E3 Advisory in this submission provides an avenue for the adoption of an incremental cost allocation that avoids the perceived cross-subsidisation in all considered cases across the network, in this instance, particularly focused on PZ 3 originating traffics deducted from the stand alone costs of the Constrained Network.

ARTC acknowledges the concerns of the ACCC and has worked through the issues to develop allocation principles which meet the ACCC's concerns to ensure that the cost of capacity increments are allocated to those that cause them. In seeking to develop robust incremental cost allocation in the areas of variable maintenance, capacity and sustaining capital expenses, ARTC has explored a number of conceptual matters that it believes require further consideration by the ACCC before adopting a methodology to determine the implied incremental costs in stand alone. A summary of these matters include:

- The Draft Determination appears to endorse the concept of the allocation of long run average costs, including the allocation of sunk costs, on an actual usage basis, similar to a flat rate user pays regime. This appears to be inconsistent with the concept of incremental allocation. One effect of this is to draw the network into a single Pricing Zone. Access Holders have not indicated support for the concept of a single Pricing Zone and the resultant averaging of the Hunter Valley coal chain costs over PZ 1, 2 and 3 users.
- The analysis on which the Draft Determination is based appears to assume that the consumption of capacity is homogenous and simple in nature. The WIK analysis doesn't take into account the complexity of the Hunter Valley coal chain and the operations of the network.
- The Draft Determination explains the inclusion of capital costs on the basis of delivering incremental capacity; albeit that there is no analysis to identify the network users for whom the capacity is being provided. ARTC believes that this facet of the review requires serious consideration when the contractual triggers to the creation of this investment and the timing of the users who triggered it is thoroughly explored. ARTC recognises that this would be a complex task, but if the ACCC is determined that an incremental capital approach is required, it is necessary. In its absence, WIK has allocated the incremental costs on the basis of actual usage of the network, an inappropriate mechanism for dealing with incremental capital which could lead to a decision being at odds with the regulatory regime's attempts to limit barriers to growth and entry. ARTC's case study takes the temporal nature of these investments into account.
- Contrary to the Draft Determination, ARTC argues that its risk profile is influenced by this determination. In particular, by way of inferred stand alone costs being only borne by the currently Constrained Network users creating a residual liability if portions of the network move in and out of 'constrained' status from time to time and/or users no longer contribute to these incremental costs for a number of potential reasons. This inference will

undoubtedly require ARTC to consider its risk profile in any future investment decisions and in the 2016 HVAU.

ARTC recognises that a number of stakeholders and the ACCC have raised concerns that the current processes give rise to a perception that a cross-subsidy exists. However such a view has not been clearly demonstrated by WIK and its simplistic ex-post averaging methodology. ARTC has engaged E3 Advisory to develop an approach that reflects the complexity of the Hunter Valley's coal chain. To the extent that the ACCC continues to view it appropriate to include capital costs in an assessment of incremental costs, ARTC is willing to work constructively with the ACCC to resolve these issues and develop a methodology based on the principles established in the E3 Advisory report. ARTC believes that this approach would provide a solid base to address the ACCC's core issues set out in the Draft Determination; albeit that conceptual concerns remain and ARTC maintains that its current approach is consistent with the provisions of the 2011 HVAU.

ARTC looks forward to engaging with the ACCC on these matters and developing a sound principle that meets the key concerns of all stakeholders.

2 Introduction

2.1 Purpose Of This Submission

This submission is made by the Australian Rail Track Corporation (**ARTC**) in response to the Draft Determination published by the Australian Competition & Consumer Commission (**ACCC**) on 30 October 2015 in relation to an assessment of compliance by ARTC with the 2011 Hunter Valley Coal Network Access Undertaking (**2011 HVAU**) for the 2013 calendar year.¹

Capitalised terms used in this submission are as per the definitions in the 2011 HVAU unless otherwise obvious from the context.

2.2 Status Of This Submission

This submission contains no confidential information and may be published by the ACCC at its discretion.

2.3 Background

The 2011 HVAU is a voluntary undertaking that sets out the process by which ARTC will grant access to the Hunter Valley coal rail network. It covers, *inter alia*, certain limits on pricing, pricing differentiation and revenue and an Indicative Access Holder Agreement. The 2011 HVAU requires ARTC to submit to the ACCC each year details of ARTC's revenue, expenditure and other parameters to allow the ACCC to assess ARTC's compliance with the 2011 HVAU.² Note that the amended version of the 2011 HVAU as approved by the ACCC 17 October 2012 applies to the 2013 compliance assessment.

In its final Determination on ARTC compliance with the 2011 HVAU for the 2012 calendar year, the ACCC indicated that it would conduct a public review of the revenue allocation across the Hunter Valley coal network. The ACCC considered that such a review would assist in increasing transparency and informed decision making.³

The ACCC issued a consultation paper on 16 June 2014, raising a number of matters, principally relating to the method for allocating revenue under the 2011 HVAU. This was followed by a position paper on 26 November 2014 in which the ACCC indicated a concern that ARTC may not apply revenue allocations as per the ACCC's understanding of the revenue limits. At each stage, submissions were invited from all stakeholders.

The ACCC issued a Draft Determination on 30 October 2015, indicating a view that, *inter alia*, the revenue allocation method adopted by ARTC has resulted in a Ceiling Limit for the Constrained Network (and applied to the Constrained Group of Traffics) that exceeds the stand alone cost of the Constrained Network.

This submission sets out conceptual considerations ARTC believes are pertinent to the application of incremental costs, commentary on the assessment provided to the ACCC by WIK, and an

¹ A copy of the 2011 HVAU as amended 17 October 2012 and effective from 7 November 2012 can be downloaded from http://www.artc.com.au/customers/access-hunter-valley/access-undertaking/library/2012_HVAU_undertaking.pdf

² 2011 HVAU section 4.10 and Schedule G

³ ACCC "Determination, Australian Rail Track Corporation's compliance with the financial model and pricing principles in the Hunter Valley Coal Network Access Undertaking for January – December 2012" 24 March 2014 p.7

evaluation of how these costs could be evaluated and apportioned in response to the Draft Determination.

3 ARTC's Understanding Of ACCC Draft Determination

3.1 Matters Not At Forefront

The Draft Determination recognised a number of areas where the ACCC accepted that ARTC had complied with the 2011 HVAU for 2013. In several instances, this is subject to the provision of further information.

3.1.1 Capital Costs & Roll-Forward With Exception Of Identified Errors

The Draft Determination approved the roll forward of capital expenditure proposed by ARTC for 2013 with the exception that an error identified in the calculations should be corrected.⁴ This error was that the amount for loss on disposals, \$6.17m, had been applied to the reduction in the capital base instead of the actual disposals value of \$6.98m. ARTC had become aware of the error through earlier discussions with the ACCC and has agreed the error and the correction as proposed by the ACCC. It is noted that, other things being equal, the result is a reduction in the revenue Ceiling Limit of \$65,606.

In addition, in the process of responding to ACCC queries since the original compliance documentation was submitted, ARTC has become aware of several minor allocations requiring adjustment. While these are not material to the result, ARTC intends to correct these allocations in the final set of models provided to the ACCC once all other matters have been finalised.

3.1.2 Operating Costs – PZ 3 Further Information Provided

The Draft Determination found that operating costs for the Constrained Network were efficient.⁵

The ACCC sought further information in relation to operating costs for Segments in PZ 3. ARTC has responded to the ACCC in confidence, providing further details of the various elements of operating costs claimed for these Segments.

3.1.3 True Up Test

The Draft Determination found that ARTC has complied with the True Up Test on the basis of the independent audit report provided by BDO.⁶

3.2 Stand alone Cost Of Constrained Network

The ACCC Draft Determination indicates that ARTC has included costs in the Ceiling Limit applicable to the Constrained Group of Mines that should have been treated as incremental and applied to PZ 3 traffics on the basis of their shared usage in PZ 1. In applying these costs in totality to the Ceiling Limit, ARTC has included costs above the stand alone costs for the Constrained Group of Mines.

⁴ ACCC 2015 Draft Determination p.16-18

⁵ Ibid. p.21-24

⁶ Ibid. p.43

ARTC believes that this approach to apportioning costs as incremental over longer run averages is a new approach to that conceived and applied by ARTC in its prior allocations and compliance assessments.

The ACCC's concern appears primarily related to the fact that, as in previous compliance assessments, ARTC has:

"subtracted only the direct costs (i.e. variable maintenance costs) associated with Pricing Zone 3 Access Holders' use of Pricing Zone 1 from the costs of the Constrained Network to be recovered from Constrained Coal Customers ..."

As a result, in the ACCC's view, Constrained Coal Customers were proposed to pay more than their stand alone costs. Further:

"The ACCC was of the preliminary view that the proportion of the efficient costs incurred within the Constrained Network to be reconciled with the revenue received from Constrained Coal Customers should be calculated by subtracting the incremental costs (i.e. avoidable costs, of which direct costs are a subset) associated with Pricing Zone 3 Access Holders' use of Pricing Zone 1 rather than just the direct costs."⁷

In arriving at this conclusion, the ACCC has engaged German economic consultant WIK-Consult GmbH (**WIK**), who, in turn, have engaged the German engineering consultant TÜV Rheinland to "... estimate the incremental costs of Pricing Zone 3 Access Holders' use of Pricing Zone 1".⁸

To carry out its analysis, WIK has identified costs within each Segment as incremental or fixed and then allocated the incremental costs to all coal traffics using an allocator such as train kilometres (**Train Km**) or gross tonne kilometres (**GTK**). PZ 3 traffics are allocated a portion of these incremental costs with the balance being included in the stand alone costs for the Constrained Network.

Through this process, WIK has determined that incremental costs of \$14.6m should have been applied to PZ 3 originating traffics and excluded from the Constrained Network stand alone cost based compared to the \$2.5m in ARTC's 2013 compliance submission

4 Conceptual Considerations

In this section of the submission, ARTC raises selected areas for consideration in developing a thorough comprehension as to how incremental costs could be evaluated; both historically and in future settings in response to the approach taken in the Draft Determination that are of a general conceptual nature. Matters relating specifically to the WIK report are discussed in section 6.

4.1 The Nature Of Incremental Costs

4.1.1 Defining A Cost As Avoidable

The Draft Determination seeks to deduct an allocation of incremental costs applicable to PZ 3 traffics from the stand alone costs applicable to the Constrained Network. The analysis seeks to

⁷ Ibid. p.27

⁸ Ibid. p.40

recognise and allocate long run avoidable costs as incremental costs, noting this is an alternate method to the practice up to the end of 2012.⁹

ARTC recognises that it is appropriate to allocate long run avoidable costs with the service that requires application of those costs in circumstances where such costs are actually avoidable and can be clearly and unambiguously identified with a particular service. Section 6 of this submission discusses the identification and weighting of these costs and challenges the costs identified by WIK as incremental.

In particular, it is ARTC's view that the methods adopted by WIK do not achieve a clear recognition of the avoidable costs associated with any specific service or group of services provided by ARTC for past activities.

A long run avoidable cost is one that, is avoidable in the long term. Where there are repetitive costs incurred of a new nature, e.g. a maintenance activity on the network, it is not controversial that such a cost might not be undertaken should the service requiring that cost cease to be provided. Where the unit of activity causing the cost can be attributed to the service which is ceasing, then the attribution of the cost to the relevant service should be straightforward.

Where costs are necessarily incurred that are required to provide a group of services, e.g. to provide the network for a series of traffics from different load-points or an additional unit of traffic from a single load-point, the attribution of those costs to a particular service becomes more complex. ARTC considers that if the consumption of the unit of maintenance is relatively uniform across the traffics that utilise that part of the network, then it would be reasonable to allocate the cost across the units of traffic that use that part of the network.

However, to the extent that there is a degree of fixedness in the cost, then it could be difficult to consider the component as incremental at the individual unit of service provided, though it might be incremental at a higher scale of usage, e.g. a cost that might be partly fixed at the level of a specific unit of the service provided, say a Train Km or a GTK, might reasonably be recognised as avoidable if all traffic on the relevant Segment ceases.

It is this understanding of avoidable costs that ARTC has previously applied through the 2011 HVAU by the allocation of Direct Costs to traffics as being the relevant costs that are avoidable and therefore not required as part of the stand alone costs applicable to the remaining traffics.

However, it becomes increasingly difficult to apply the same approach to capital costs. A capital expenditure, once committed cannot be uncommitted and is considered a sunk cost. ARTC accepts it is possible that a prospective capital expenditure can be categorised as incremental if it can be allocated against specific traffics, but once the expenditure is committed it can no longer be described as avoidable, unless the relevant asset could reasonably be optimised out of the network. In this example, an additional unit of traffic (i.e. after the investment decision is made) that utilises the capacity resulting from the capital expenditure does not in any sense cause the cost to be incurred nor does the removal of an existing portion of the traffic reduce the value of the sunk cost. Committed capital costs would therefore be in the nature of a fixed cost and, by extension, costs necessarily recognised as pertaining directly to the capital expenditure, in this instance depreciation of the asset and a return on capital, must also be considered fixed.

In the Hunter Valley network, the profile of demand for capacity varies from one load point to another. Investments in the network have been added to meet these variable supply patterns for Access Holders and not necessarily for specific tonnages. The resulting capacity created, being

⁹ ACCC 2015 pp.6, 33 and WIK p.18

designed to cope with a peak demand where the individual peaks of demand coincide (up to a point), tends to be 'lumpy'. It is therefore often the case that the most logical and efficient infrastructure project will deliver a quantum of capacity that exceeds the actual capacity demand for which it is ostensibly being built; noting that any understanding of 'actual' in this instance tends to be understood as the average demand rather than the peak demand.

To the extent that the initial driver of additional capacity is considered to be the incremental user, future users would merely improve the allocative efficiency of the investment. Allocating the cost over all users, especially where future users were not contracted at the time of the investment decision, therefore defrays the cost of the initial investment to the original incremental user. This is an average not incremental cost allocation and therefore the incremental cost to the initial user is significantly understated as the incremental impact of the initial investment is defrayed.

To identify capital costs, or part thereof, as being incremental (in the sense that they could be unambiguously assigned between traffics), it would therefore be necessary to identify the traffics for which the capital was expended. The costs so identified would then be allocated to that group of traffics. It would not seem logical to assign any such cost to any additional traffics using that infrastructure. If further infrastructure is required, then the new elements of traffic so identified should bear the additional cost.

A critical conclusion of this methodology is that the impact of incremental costs should only be allocated against volumes committed at the time the project was commissioned. This is relatively simple for stand alone users, e.g. were ARTC to build a spur line for a new user. However the impact of shared usage networks and volume variations over time add further complications, particularly as volumes rise and fall across users.

Coal traffics are not constant over time. New traffics arise, others cease to operate, in some instances one replacing another, while at other times they might overlap, temporarily increasing the demand for capacity before some traffic falls away. So, even if capacity can be seen as a homogenous measure, the requirement for capacity varies over any given period of time.

Treating capital expenditures as variable (even in the long run) suggests a different approach to investing in, and contracting of, the network would be required, where ARTC would identify a quantum of capacity and sell that to a particular user and responsibility for recovery of the associated costs would rest with that user. This methodology is not how the 2011 HVAU and the Indicative Access Holder Agreement have been structured.

It is also the case that capacity is not a fixed measure and the consumption of it is capable of being influenced by changes to infrastructure in other parts of the network, and indeed off the network. For example, a change in the capacity and operating strategy for one of the coal receipt terminals is likely to have a material impact on the capacity of the network. Similarly, the configuration of trains by the train operators and the efficiency of their operations will have a material impact on the capacity of the network. The assessment of investments for the network must necessarily take into account a set of operating assumptions at the time but those assumptions may be substantially modified over relatively short time frames. Given this level of fluidity in the elements that influence capacity, to assess what investment is incremental in terms of new volumes is a matter of judgement and will vary depending on when the assessment is made.

The WIK methodology takes a set of expenditures, including capital, assesses them as incremental and then spreads these across the available allocation units (either GTK or Train Km) for actual operations in 2013. This does not assess whether the costs were, in fact, avoidable to a particular traffic or group of traffics and whether the investments would have been committed in the absence of PZ 3 volumes. A useful proxy to determine the avoidable nature of the investment is to look at

who approved the project and compare that to the volumes against which the cost is attributed. This method could be valid for forward seeking investments also. As discussed later, many of the investments deemed by WIK as avoidable, were commissioned prior to Maules Creek and other growth volumes in PZ3 having received mining department planning approval, let alone contracted to ARTC. Yet the WIK analysis, if applied to the 2015 calendar year would allocate a portion of these costs to Maules Creek volumes as being avoidable to Maules Creek.

A further issue with the methodology is that, when applied in 2015, PZ 3 users do not receive a benefit for more efficient utilisation of the network by transporting more volume on less train paths providing PZ 1 with an increase in capacity. In this case, not only do they not receive a benefit but the cost allocation increases, implying the stand alone cost for the Constrained Network actually reduces, despite its access to capacity increasing. The fact that the stand alone cost of capacity in the Constrained Network reduces despite an increase in capacity availability, suggests a significant issue with the WIK methodology that requires further attention.

4.1.2 Assumption Of Homogeneity

Whilst not expected to be experts in the Hunter Valley Coal Chain, WIK appear to view the consumption of capacity as being homogenous. This is evidenced by WIK's analysis being based on allocations of incremental cost by simple measures such as GTK or Train Km. Such an assumption underpins an assertion that building an element of infrastructure must be assignable to different users in some simple way – that there is a clear and simple relationship regarding the consumption of capacity that would allow this rather than these allocators merely allocating a fixed cost.

As highlighted above, the interrelated nature of the Hunter Valley network and wider coal chain make it inappropriate to adopt an aggregated and simplistic approach to a complicated system behaviour. This approach does not reflect the differing relationships between capacity and volume which vary significantly across Access Holders and is impacted by the varying nature of coal export terminal operations and train operations.

The relationship between peak capacity and volume (assessed as average usage) requirements is termed load factor¹⁰. If an Access Holder rails at a constant rate, this provides a load factor of 1. If the aggregate usage of a network provides for a load factor of 1, capacity of the network would be lower than if load factor is greater than 1.

Assuming a constant cost of capacity e.g. a given network configuration, a lower load factor will have higher volumes to allocate the costs across, therefore a higher load factor will generate a higher average cost of capacity compared to a lower ratio. A methodology which allocates incremental capacity costs based on an average cost distribution is allocatively inefficient and could be conceived as creating a cross-subsidy from efficient base load users to inefficient peaky users.

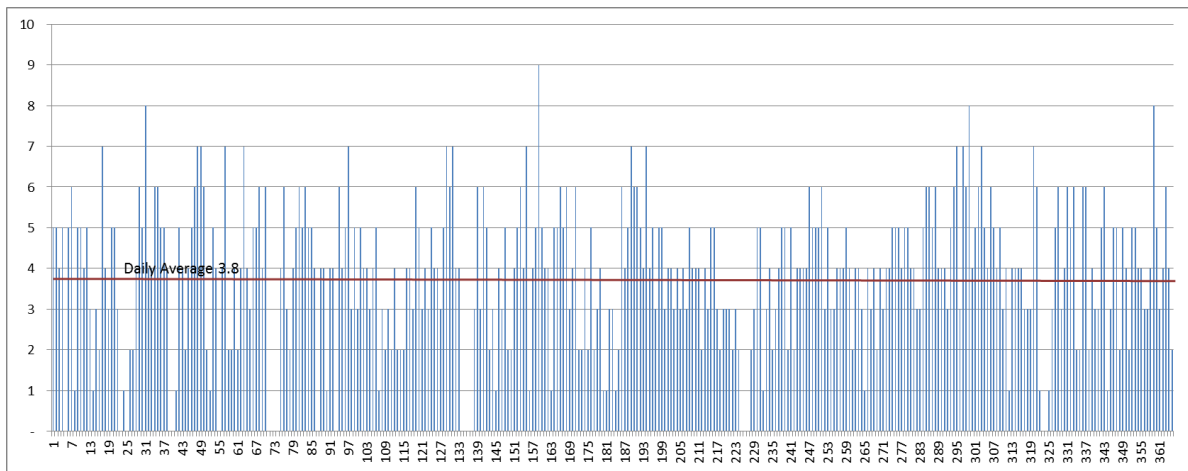
The Hunter Valley network has a variety of users with different infrastructure capabilities such as load point capacity and different marketing strategies and operating philosophies as to how to fulfil cargoes. In addition, the two coal receipt terminals have significantly different capabilities that influence the way in which pad space is available to accumulate cargoes. Different Access Holders contract for haulage services with train operators that use a variety of rolling stock configurations which also impacts on the variability of train operations. Lastly, the rail infrastructure is not uniform and this also impacts on the way cargoes are assembled. It is this myriad of factors that leads to the requirement for the Hunter Valley Coal Chain Coordinator (**HVCCC**) to provide both the day to

¹⁰ For the purposes of this discussion, taken to be equal to peak over average, so numbers must be greater than 1.

day coal chain planning and also to advise on the longer term investments required to make the network contribute positively to the coal chain actively considering these multiple supply and demand factors.

Notwithstanding the role of the HVCCC, the requirements for an individual network user vary hugely from day to day. As an example of this variability of railings experienced in the Hunter Valley, Figure 1 shows the number of trains from one load point on a daily basis across 2013.

Figure 1: Single Load Point Daily Railing Variation 2013

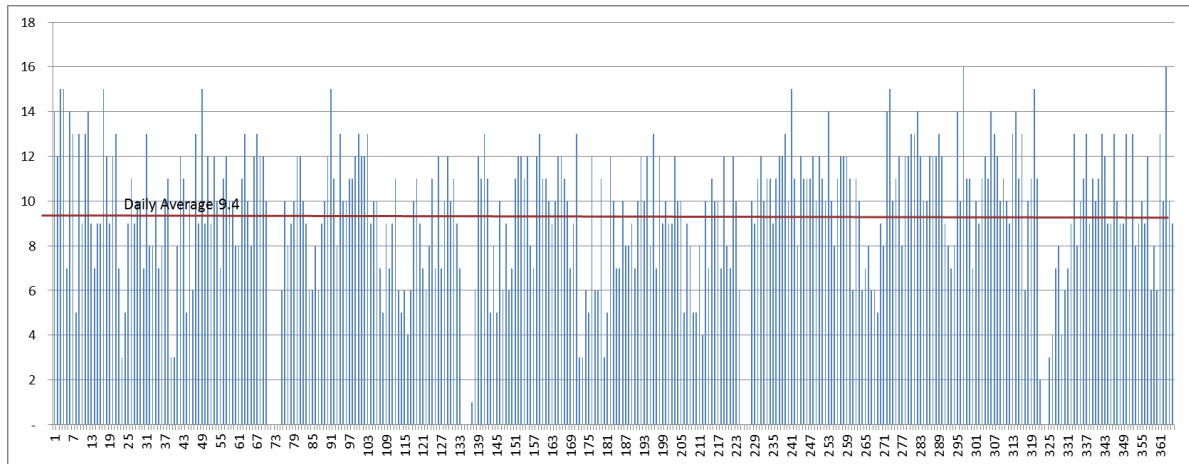


As can be seen, demand varies from zero (most probably on maintenance days) up to 9 trains on one day. The average daily demand is 3.8 trains with a mode of 4 trains. This represents a load factor of 2.3 for this particular load point. This level of individual load point variation is not unusual.

It is certainly the case that the sharing of capacity between users, in combination with the limits of other parts of the coal chain, serves to dampen the variability of railings at a total level, but this does not completely remove the need for peaking capacity by any means. It is also the case that, to the extent the network is capable of handling larger volumes, some Access Holders will take advantage of the increased infrastructure even though they may not have actually modified their total volume requirements.

Figure 2 demonstrates that even aggregating volumes across several load points only dampens the variability of demand to a certain extent. In this case daily demand is shown across the Whittingham Branch as a whole.

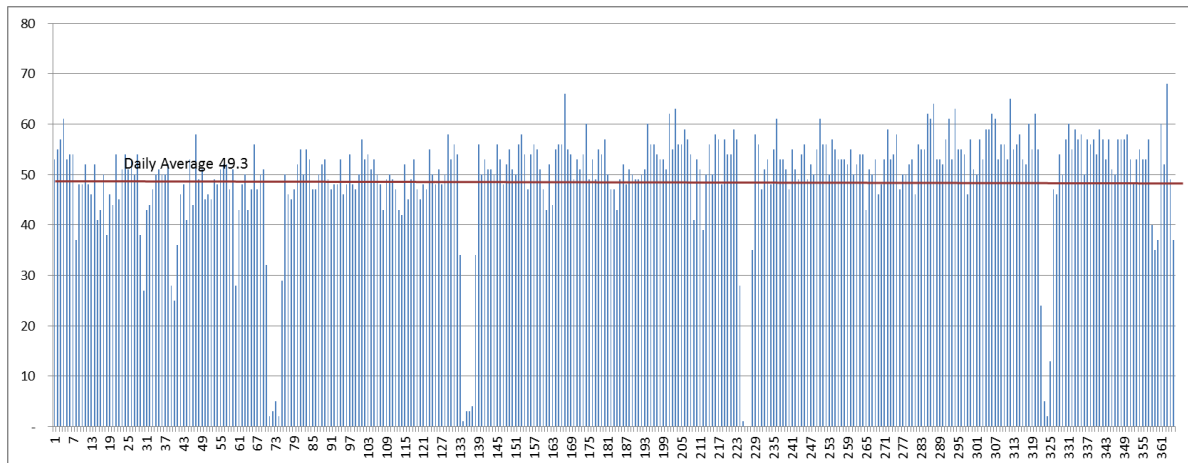
Figure 2: Daily Demand From Whittingham Brach In 2013



The maximum value is 16 trains, the minimum 0, again most likely on maintenance days. The daily average is 9.4 trains with a mode of 10 trains. The load factor of is 1.7. The requirement for trains from the entire branch is certainly smoother than from a single load point, but there remains substantial variation from day to day.

A further smoothing of demand occurs looking at the network as a whole from PZ 1 and PZ 2, i.e. excluding PZ 3 trains, as shown in Figure 3.

Figure 3: Daily Demand From All PZ 1 & 2 In 2013



At this level, the maximum value is 68 trains, the minimum 0. The daily average is 49.3 trains with a mode of 53 trains. The load factor of is still well above that of even railings at 1.379. This demonstrates the requirement for substantial capacity in excess of average demand even excluding any requirement for PZ 3 traffic.

With all traffic taken into account, including the PZ 3 traffic, an average of 56 trains per day and a mode of 57 were required across the entire network with a peak actual operation of 77 trains in one day, a load factor of 1.375, actually slightly lower than without PZ 3 traffics. This demonstrates that even taking the benefit of smoothing demand across the entire network, ARTC is required to provide capacity well above the sum of the individually contracted volumes.

From the foregoing, it can be seen that it is a far from simple exercise to assign capacity to a particular load point or Access Holder, a group of traffics or even originating Pricing Zone as being unambiguously avoidable and serves to highlight why it would be an impractical exercise to judge capital costs as though they were incremental to a particular tranche of volume in isolation of the factors present at the time of the investment.

4.2 Temporal Considerations

There are several issues associated with the timing of the allocation that give rise to questions on the method being proposed.

4.2.1 Inconsistency Between An Incremental Capital Approach & Depreciation

The 2011 HVAU provides for the depreciation of assets over the average remaining life of the coal mines serviced by the network. As an average, this remaining life does not reflect any particular mine life. This is inconsistent with a proposition that investments are related to a specific traffic or groups of traffics that would be avoidable if the traffics were not present. It is reflective of the fact that the network services an undifferentiated group of traffics that require the network services in aggregate. With the exception of a capital cost relating unambiguously to a specific mine, say one that is at the end of the line, if one traffic drops out, the remaining traffics using the relevant Segments would bear the cost of servicing that investment – which is consistent with section 4.20(c) of the 2011 HVAU which requires ARTC to determine Access charges based on the contracted coal volumes and the forecast costs for a calendar year and the basis on which the 2011 H2 and 2012 compliance assessments have been carried out. Yet if the capital cost is incremental and avoidable, then presumably such a cost should not be taken up by the remaining traffics using the relevant Segments – the effect of the Draft Determination would seemingly be that the proportion of the capital that would have been allocated to the defunct traffic is incremental and payable by only that traffic. It would be inconsistent to say that this should be covered by the remaining traffics, and yet ARTC's exposure to such a loss is contrary to agglomeration of costs that underpins the 2011 HVAU.

4.2.2 Inconsistency With Contracted Volumes

The 2011 HVAU provides for contracts with a rolling 10 year life. During the period since the commencement of the 2011 HVAU, it is the case that some Access Holders have chosen not to renew tranches of their contracted volumes on expiry of the 10 year term. However, the remaining mine life over which assets are being depreciated exceeds the life of these traffics for which the contract term is not being renewed (i.e. remaining mine life is 16 years, or 2032, as at 2016 whereas some traffics will terminate in 2023). In fact all exiting contracted volumes are only contracted for a maximum of 10 years and so could be terminated prior to 2032. It is unclear from the Draft Determination how ARTC is meant to treat the capital costs associated with the capacity that is consumed by those contracted volumes that will terminate prior to the expiration of the average mine life period. Is it the case that ARTC is meant to forego the supposed incremental cost allocations associated with these traffics?

If ARTC had anticipated the logic that capacity investments are avoidable, and therefore identifiable with particular tranches of traffic, ARTC would have proposed a fundamentally different undertaking and contractual structure for the network in place of the 2011 HVAU, one that clearly linked responsibility for each investment with the particular tranche of traffic for which the investment was proposed. Instead, an undertaking was proposed and accepted based on a recognition that capital costs (and most other costs except Direct Costs) were fixed and would be allocated on that basis.

4.2.3 Allocation Where Mines Not Even Committed

At the time that ARTC committed to a number of the investments reflected in the WIK analysis, much of the increase in traffics originating in PZ 3 had not been contracted with ARTC, nor even committed to by the relevant mining company. While ARTC's investment decisions may have been influenced in part by prospective volumes, e.g. this may influence the choice of one investment over another if it provided "future-proofing", neither ARTC nor the Access Holders who endorsed the projects would have committed to major investments of a purely speculative nature. Notwithstanding that ARTC has discretion to include uncontracted volumes under 2011 HVAU section 9.2(f), it has been ARTC's practice not to do so.

A substantial proportion of the Major Projects included in the WIK analysis were committed to prior to the major volume increases in traffics originating from PZ 3 being either contracted or even committed. For example, the Maules Creek mine which commenced contracted railings in 2015 was not given mining consent until October 2012. Yet on the basis of the WIK analysis, using as it does actual operating data for the 2013 assessment year, it would appear that the ACCC is proposing that the Maules Creek volumes in 2015 would be allocated a portion of these earlier project costs on the basis that they are incremental; notwithstanding that this mine was not even approved at the time.

This highlights the WIK approach as one of averaging rather than marginalising costs. If ARTC was to accept a change to the allocation methodology going forward, the solution adopted should avoid this issue by excluding projects committed prior to the contracting of Maules Creek volumes in this example.

4.3 Reopening Of Prior Decisions

4.3.1 Inconsistent With Draft Determination

The Draft Determination makes the point that the ACCC is not intending to reopen the 2012 (and by implication the 2011 H2) assessments, as to do so "... after having made a Final Determination based on the information then before the ACCC would reduce regulatory certainty".¹¹

ARTC certainly supports this view. However, ARTC believes that the approach adopted in the WIK report and supported by the Draft Determination is inconsistent with this view as it changes the treatment of values from the treatment in those assessments. For example, 87% of the Major Capital projects (by value) included in the WIK analysis were commissioned and accepted by regulators in regulatory decisions prior to 2013. Yet the ACCC appears to be recategorising these expenditures in order to apply the depreciation and return calculations for 2013 (and presumably beyond) as incremental. Capital that was previously categorised as a fixed cost and therefore part of the stand alone costs of the Segments constituting the Constrained Network is now being reassigned as incremental and these elements are no longer part of the stand alone costs of the Constrained Network. ARTC cannot understand why this does not amount to reopening those prior decisions even if it does not amount to retrospectively changing the 2012 and 2011H2 outcomes.

It is not the case that the depreciation and return costs in 2013 are in some way independent from the underlying assets that give rise to those costs. Regardless of whether or not the new incremental interpretation is applied for new assets commissioned and added to the RAB/RAB Floor Limit from 2013 onwards, ARTC believes that it would be inconsistent with the ACCC's own reasoning to apply this method to pre-2013 capital expenditures.

¹¹ ACCC 2015 op. cit. p.37

4.3.2 Inconsistent With Prior Regulatory Outcomes

A view that prior decisions should not be reopened would appear to heighten the inconsistency with respect to capital expenditures incurred under a prior regulatory and contracting structure. Approximately 30% of the capital expenditure included in the WIK analysis (including interest during construction) was commissioned and added to the asset base under the NSW Rail Access Undertaking (NSWRAU), prior to 1 July 2011 and a much larger proportion was approved during that period to be commissioned under the 2011 HVAU. Regulatory oversight of that investment and compliance with the then applicable regulatory regime was provided by the NSW Independent Pricing And Regulatory Tribunal (IPART).

The opening values for the RAB/RAB Floor Limit were rolled over from the closing value under the NSWRAU as at 30 June 2011. These values were rolled over and accepted into the RAB/RAB Floor Limit by the ACCC or, in the case of additional Segments added into the 2011 HVAU that were not part of the coal network under the NSWRAU values were approved by the ACCC directly. At no time prior to the 2013 compliance assessment was any issue expressed that these values ought to be split into fixed and incremental components.

To recategorise the costs associated with these investments (depreciation and return) as having some portions fixed and some incremental now is to indirectly reopen the original decisions as to the nature of the underlying asset for its own determinations for 2012, 2011 H2 and the approval of the 2011 HVAU. It would also indirectly reopen the decisions made by IPART for the years between 2008/09 and 2010/11 financial years in order to recategorise these expenditures.

4.3.3 Temporal Issues

The issues raised above in sections 4.2 and 4.3 reinforce the requirement that any change in methodology in allocating capital costs between fixed and variable should only occur post 2013. This timing is critical as it:

- Ensures the capacity benefits in the Constrained Network of investments outside that network are accounted for;
- Ensures that costs of projects commissioned prior to this time are not allocated to volumes that were uncommitted at that time; and
- Avoids the implied re-opening of prior decisions.

Although the issue of load factor cross-subsidies will remain present in the absence of specific capacity contracts (which, as raised above, are opposite to the methodology in the 2011 HVAU and Indicative Access Holder Agreement), the avoidance of the issues above, minimises the extent of this cross-subsidy.

4.4 Risk

ARTC proposed the 2011 HVAU and believe that it was approved by the ACCC on the basis of the treatment of costs as provided to the ACCC during the approval process. Specifically this provided for an assessment of short run incremental maintenance costs (Direct Costs) with all other costs being fixed and applicable to the coal traffics under an Access Holder Agreement with the stand alone costs of Segments forming the Constrained Network including all of those fixed costs plus the applicable Direct Costs.

The Draft Determination modifies this position so that a number of costs, in particular capital related costs are now deemed as incremental and applicable to a wider group of traffics, including unconstrained traffics. It appears that the Draft Determination makes an assumption that this change is risk neutral to ARTC on the basis that the change in cost allocations to increase the burden on PZ 3 originating traffics is offset by a number of mechanisms, as per following quote:

“The ACCC considered that the existing mechanisms in the HVAU, such as take-or-pay contracts, accelerated depreciation, the rate of return, the unders and overs accounting framework and loss capitalisation in Pricing Zone 3 adequately compensate ARTC for the risks associated with its investments on the Hunter Valley Coal Network and in particular in Pricing Zone 3. Therefore, although ARTC argued that a change to its current approach would stifle investment and increase risk, the ACCC was of the view that existing mechanisms in the HVAU should mitigate this risk.”¹²

ARTC believes that whilst these mechanisms contribute to the overall network risk management, they do not mitigate the specific risk of this decision.

As highlighted above, this Draft Determination increases the stranding risk of the network based on the life of mines versus the average mine life of the Hunter Valley. This decision increases the extent of investments exposed to this risk, thereby increasing ARTC's risk exposure. The specific elements raised by the ACCC are each discussed further below:

Take-or-pay contracts

It is true that ARTC has take-or-pay contracts with PZ 3 coal producers. However, the take-or-pay components only cover ARTC's fixed costs. By definition, an increase in the incremental costs is not covered by this provision, and ARTC could only recover an incremental cost assigned to PZ 3 producers on an actual usage basis. Loss capitalisation mitigates the earning risk, however this effectively transfers the risk to stranding risk; which therefore increases.

Accelerated depreciation

Depreciation is based on the average remaining life of mines serviced by the Hunter Valley network. This is not the same as accelerated depreciation and reflects an expectation that mining activity will fall over time as the resource base is exhausted.

As this is an averaging approach, some mines will operate longer than the average and some shorter, so there will be discrepancies between specific lives and the network average; but this does not reflect accelerated depreciation.

To the extent that PZ 3 mines have a life that is shorter than average, this may even suggest an increased risk as there is a lack of clarity on the treatment of these incremental PZ 1 investments in the absence of PZ 3 volumes. Similarly, one would expect that this might impact PZ 2 mines, notwithstanding that the WIK analysis does not specifically address an allocation of PZ 1 assets to PZ 2 traffics, though it clearly does assign incremental costs to PZ 2 traffics. An approach that allocates costs as incremental rather than fixed would, in the case that the investments are not fully depreciated, leave ARTC in a position that the costs cannot be recovered against the remaining PZ 1 traffic. This highlights an increased stranding risk for ARTC, not only in PZ 3, but also in PZ 2 and potentially even at the periphery of PZ 1.

¹² Ibid. pp.26-27

Rate of return

ARTC receives a rate of return agreed with coal producers and approved by the ACCC under a set of risk assumptions. Those assumptions included the treatment of capital costs as fixed costs and that these costs would be included in the stand alone costs of the relevant Segments. A change to this assumption would require a reassessment as to the adequacy of the current rate of return, given the increased risk exposure to ARTC.

Unders and overs accounting framework

The unders and overs mechanism only applies to the Constrained Group of Mines. It does not apply to unconstrained Access Holders such as the PZ 3 producers and will not do so until such time as the Constrained Network expands to include the PZ 3 Segments. As such this does not provide any risk mitigation to ARTC with respect to the increased allocation of incremental cost to PZ 3 traffics.

Loss capitalisation

It is true that loss capitalisation would apply to any under-recovery of costs for PZ 3 producers. However, loss capitalisation merely serves to keep a cost “on the books”; without loss capitalisation, a loss in one year could not be subsequently recovered.

However, loss capitalisation does not serve to guarantee an eventual repayment of accumulated losses. In the worst case, ARTC could be in the position that losses merely continue to accumulate without ever being paid back; representing the stranding risk to which ARTC is exposed.

Therefore, ARTC sees loss capitalisation as an ineffective mechanism to mitigate stranding risk. As the ACCC’s proposal is to increase the costs to network users who are not able to pay the full annual cost of the network (even where only Direct Costs are contributed to PZ 1), this will increase capitalised losses and will increase stranding risk.

4.5 Change Of Interpretation Appears To Be Selective

The ACCC does not appear to dispute ARTC’s view that the Floor Limit comprise the Direct Costs for a traffic or group of traffics. However, the Draft Determination articulates a change of interpretation from prior compliance assessments and is new to ARTC; that the Economic Cost of a Segment or group of Segments that constitutes the Ceiling Limit for the Constrained Network is not Economic Cost less Direct Cost applicable to other traffics, but is Economic Cost less incremental cost applicable to PZ 3 traffics, as per the following quote:

“...the efficient costs incurred within the Constrained Network to be reconciled with the revenue received from Constrained Coal Customers should be calculated by subtracting the incremental costs associated with Pricing Zone 3 Access Holders’ use of Pricing Zone 1 rather than just the Direct Costs (i.e. the avoidable costs from a long-term perspective, of which Direct Costs are a subset).”¹³

The Draft Determination is couched in terms of the Constrained Network and PZ 3 originating traffics. This appears to assume that the Ceiling Limit need only be applied to the combination of mines forming PZ 1 and PZ 2, leaving PZ 3 users to be dealt with separately. This is not correct as the Ceiling Limit is not applied to a pre-defined Constrained Network.

¹³ ACCC 2015 op. cit. p.6

The Constrained Network is not a fixed set of Segments but is assessed annually as part of the compliance assessment process. The fact that the Constrained Network has not changed since the commencement of the 2011 HVAU does not mean that it cannot change. Not only may some or all of PZ 3 Segments join the Constrained Network (in fact ARTC expects that they will, although that timing would be delayed via the impact of the Draft Determination), but it is also the case that some Segments that are currently constrained may become unconstrained in future years.

An example of a potential variation is if Ulan, at the end of PZ 2 were to halt production and cease payments, Segment 974 from Wipinjong to Ulan Junction would, without the commencement of a new traffic of sufficient volume utilising that Segment, become unconstrained and therefore removed from the Constrained Network. Neither the ACCC Draft Determination, nor the WIK analysis indicate how the proposed identification and allocation of incremental capital costs within the shared network would be carried out were this to occur.

This is not a hypothetical example. Under the predecessor to the 2011 HVAU, the NSWRAU, on which the Floor and Ceiling Limit concepts are based, the original Constrained Network had the line segment Muswellbrook to Dartbrook excised when Dartbrook mine halted operation.

It would be inappropriate to design a solution that did not recognise that the determination of incremental costs should be applied to each and all traffics in the network to allow for the potential changing of the Segments that constitute the Constrained Network.

4.6 Change Of Interpretation Mid-Term

The ACCC received detailed modelling from ARTC throughout the lead up to the approval of the 2011 HVAU and subsequently during compliance assessments for 2011 H2 and 2012 calendar years that clearly demonstrated ARTC's allocation policy based on the Economic Costs of each Segment applicable to the Ceiling, being the full Economic Cost of the Segment less Direct Cost. ARTC has previously raised the proposed change in interpretation as introducing a significant level of regulatory uncertainty; though this was dismissed by the ACCC in the draft decision :

*"The ACCC does not consider that regulatory certainty, as ARTC has submitted, provides a sufficient basis for using Direct Costs as a proxy for incremental costs when the information now before the ACCC indicates that this is not appropriate for the 2013 calendar year."*¹⁴

In the ACCC's Final Decision approving the 2011 HVAU,¹⁵ there is an extensive discussion relating to the investment framework and how it would lead to efficient investment decisions as summarised in the following quote:

*"In sum, the investment framework in the June 2011 HVAU should provide for efficient investment in the Hunter Valley rail network, in response to increasing demand, and with appropriate recognition of the interests of relevant stakeholders."*¹⁶

The ACCC approval of the 2011 HVAU does not mention incremental costs at all, let alone incremental capital costs.

The ACCC has not indicated what information is now available for the 2013 compliance year that was not previously available when those earlier decisions were made. There is nothing fundamentally different in the methods applied by ARTC in the 2013 compliance data and the

¹⁴ Ibid. p.38

¹⁵ ACCC "Decision In relation to Australian Rail Track Corporation's Hunter Valley Rail Network Undertaking" 29 June 2011 pp.14-16

¹⁶ Ibid. p.16

methods applied by ARTC in previous compliance years under the 2011 HVAU. Therefore, it is ARTC's view that to require a significant change of interpretation part way through the undertaking term introduces a significant degree of regulatory uncertainty and undermines ARTC's confidence in its ability to invest in the network.

It is ARTC's view, that the introduction of a significant change of interpretation of this nature should be done in conjunction with the 2016 HVAU. This would allow ARTC to adjust its investment decision processes, including any adjustments to the undertaking required, in an appropriate manner, rather than being required to accept a reinterpretation of past decisions that were consistent with the regulatory decisions made up until now.

It is noted that the Draft Determination provides as a justification for the application of the new interpretation mid-term that the ACCC is concerned that investment decisions are being distorted by ARTC's current interpretation and requires rectification.¹⁷ The major investments in new capacity in the network during the life of the 2011 HVAU (to June 2016) have already been commissioned or are already committed. A change to policy now will not impact on ARTC's decision-making until after the intended expiry of the 2011 HVAU in June 2016.

The majority of impact in the WIK analysis is related to major capital and interest during construction (\$11.3m out of \$14.6m), a majority of which was committed under the NSWRAU which applied the allocation methodology used by ARTC for the 2013 compliance submission. A change to the interpretation now cannot impact investment decisions already made apart from retrospectively increasing ARTC's investment risk. Only a methodology which applies from the start of the 2016 HVAU, impacting future investment decisions, complies with the ACCC's rationale for changing its interpretation.

ARTC is willing to work closely with the ACCC and stakeholders to achieve an appropriate change to the application of the revenue limits and interpretation of the components of the Ceiling Limit for the 2016 HVAU.

5 Case Study

A significant element of the incremental costs identified by WIK arises from three projects:

- Project 3585: Minimbah Bank 3rd Road (also referred to as Maitland to Minimbah 3rd Road Stage 1)
- Project 5811: Nundah Bank 3rd Road
- Project 5255: Maitland - Minimbah 3rd Road (also referred to as Maitland to Minimbah 3rd Road Stage 2)

These projects had a combined total commissioned cost to 31 December 2013 of \$617.8m, including interest during construction. Table 1 sets out the amounts capitalised into the RAB Floor Limit in each relevant period for each project. The table also shows the amount that these projects contribute to the incremental cost attributed to PZ 3, \$8.1m, which is 56% of the total amount.

¹⁷ ACCC 2015 op. cit. p.27

Table 1: Amounts Included Into RAB Floor Limit For Minimbah & Nundah 3rd Roads

Project & Period	Amount Included RAB Floor Limit		
	Capital \$	Interest \$	Total \$
3585 Minimbah Bank 3rd Road			
FY2009-2010	132,558,439	-	132,558,439
FY2010-2011	12,821,561	-	12,821,561
2011H2	1,895,771	-	1,895,771
2012	1,515,381	-	1,515,381
2013	(498,100)	-	(498,100)
Total	148,293,052	-	148,293,052
5255 Maitland To Minimbah 3rd Road			
FY2010-2011	15,000,000	-	15,000,000
2012	304,379,115	33,233,320	337,612,435
2013	33,796,814	-	33,796,814
Total	353,175,930	33,233,320	386,409,250
5811 Nundah Bank 3rd Road			
2012	70,066,438	5,306,709	75,373,147
2013	7,767,053	-	7,767,053
Total	77,833,491	5,306,709	83,140,200
Combined Projects Total	579,302,473	38,540,029	617,842,502
Incremental Cost Assigned To PZ3 In 2013 By WIK			8,112,666

Appendix A contains extracts from the ARTC 2009 and 2011 Hunter Valley Corridor Strategy documents that discuss the need for these investments. It can be seen from the extract that there are a number of issues that drive the need for the additional tracks including:

- additional capacity;
- removal of a capacity decrement due to the merging of trains from the Mt Thorley Branch onto the main trunk route;
- operational reliability, both to overcome potential stalling on the bank and to provide the opportunity to work around a train if it becomes stalled (a stalled or disabled train can create a substantial disruption to the network and banks are a location where this is more likely to occur);
- reduce network disruptions due to maintenance requirements and problems with aligning maintenance requirements across the network;
- the removal of the “shadow” cast by passenger trains both ahead of and behind their passage due to legislated priority and speed differentials; and
- increased opportunity for train resequencing, which assists in achieving greater productivity at the coal receipt terminals.

As this list demonstrates, the need for a particular piece of infrastructure is a far more complex issue than the mere assumption that more capacity is required. For these three projects WIK has

assumed 100% of the cost is avoidable. In their report, WIK provide the same comment on each of the three projects in this case study as follows:

“Project expenditures assesses [sic] incremental due to their relation to the capacity enhancements. We assume that track extensions, 3rd road, is mainly driven by asset enhancement for higher network capacity resp. reduction of maintenance impacts through increasing operational flexibility”¹⁸

WIK appear to be saying that the investments are in respect of increased operational flexibility and a reduction in network outages due to maintenance requirements. However, notwithstanding this recognition WIK still assigns 100% of the projects as incremental, suggesting a view that these operational impacts are purely incidental and insufficient to influence their assessment at all. ARTC suggests that this is a significant oversimplification of the true nature of these projects and that it would far more appropriate to characterise these major investments as being for the benefit of all users, including benefits across the coal chain as a whole, and therefore more justifiably as being a fixed cost.

For example, the ingress of trains to the trunk network from the Mt Thorley branch is only a problem because both Mt Thorley Branch traffics and other coal traffics exist. In the absence of either group of traffics the ‘problem’ would not exist. However, as the network is necessarily available to all users requiring access, it is necessary to provide a solution. The solution chosen happens to provide the solution to a number of other needs each of which will depend on relative interaction of different elements of the coal chain both on and off the rail network.

As a further example, all other things being equal, ARTC has no particular interest in the order of arrival of coal trains at the receival terminals other than to see the trains safely exit the network without detrimentally impacting other users. But the order and frequency of arrival of trains at the terminals is a matter of significance to the efficiency of the coal terminals. This holds regardless of the volumes or origin of the trains. As identified in the corridor strategy excerpts, the provision of the 3rd roads assists in the staging of port arrivals. With this in mind, it is difficult to understand an approach that would classify such an investment as somehow varying with traffic volumes from a particular location.

As identified in the Appendix A extract at A.3, the Nundah Bank 3rd Road was constructed partly to provide additional capacity. The known capacity requirement could have been satisfied with a much cheaper signalling option. The precise cost of this alternative was not closely estimated but was expected to be of the order of \$10m. However, this was rejected by the Rail Investment Group (**RIG**) which was the forerunner of the RCG. Instead, RIG opted for the additional track as that provided a superior outcome for a number of issues at a cost of \$78m. To categorise this project as being 100% incremental to provide additional capacity would be a significant miscategorisation.

Further, the subsequent (in 2015) reduction in train numbers arising from the PZ 3 30 tonne axle load project would have removed any need for the project at all from a strict capacity perspective. It is, therefore and in hind sight, questionable whether any project at all would have been required for the purpose of increasing capacity.

E3 Advisory considered the projects in this case study as part of their wider review of major capital projects. E3 Advisory came to the view that none of the three projects could reasonably be seen as being driven substantially by PZ 3 volumes given the uncontracted nature of future volumes and the RIG/RCG endorsements that were provided overwhelmingly by PZ 1 and 2 coal producers at the

¹⁸ WIK op. cit. Appendix A p.85

time. Note that the benefits to network efficiency as described above are not explicit to PZ 3 users and apply equally in presence or absence of PZ 3 traffics from the network.

In their report, E3 Advisory note that part of the justification for the projects is to provide capacity ahead of demand, i.e. it is not the case that capacity was provided for a specific requirement but in contemplation of potential demand as requested by Access Holders at the time in an environment when producers preferred that network capacity did not become a potential bottleneck to the coal chain.

6 Comments On The WIK Report

6.1 Response To Concerns Raised In The WIK Report

6.1.1 Understanding Of DORC Valuation

The WIK report suggests a misunderstanding about the use of the depreciated optimised replacement cost (**DORC**) valuation method for the network. In particular, WIK appears to confuse the fact that the DORC method was used in the initial valuation of the network and that addition of new investments at cost is a reflection of the on-going DORC value. The following quote demonstrates this misunderstanding:

“ARTC’s approach is a roll forward of book values without a determination of the real replacement costs of assets and without consideration of any optimization or efficiency adjustment.”¹⁹

The network was in fact valued using the DORC method in 1999 while the network was under the regulatory supervision of IPART. WIK’s reference to the “roll forward of book values” is in fact a roll forward not of any accounting book values but the DORC values determined and approved by IPART up to June 2011 and subsequently approved by the ACCC.

Investments in the network subsequent to the initial DORC valuation have been added to the asset base at cost (including, where appropriate, interest during construction). The rationale for this is that the investments have been approved by the relevant regulatory body as efficient and therefore represent the a continuation of the DORC valuation (with these investments depreciating over time). Optimisation of any new assets would only be required where the assets were not required for the coal network and endorsement of projects by the RCG indicates an acceptance by Access Holders that the assets are required. Therefore an optimisation assessment would be redundant. As the assets are new and acquired at market price, this is necessarily a reflection of the replacement cost.

It is unclear what WIK has in mind when claiming that “*the notion of DORC may be confusing*”.²⁰ It is noted that this was not a matter raised by WIK in discussions with ARTC.

6.1.2 Understanding Of Remaining Mine Life In Depreciation Calculation

WIK’s discussion of the use of remaining mine life appears to expect that this should be a reflection of the specific asset lives.²¹ This is incorrect. Depreciation under the 2011 HVAU is intended to write down the assets over the average remaining life of Hunter Valley mines, as approved by the ACCC. It is not intended that this is a reflection of the consumption of the assets and is not intended as some form of proxy for the useful life of the assets. This is evidenced by the fact that

¹⁹ Ibid. p.15

²⁰ Ibid. p.15

²¹ Ibid. p.15

Corridor Capital expenditures, which largely comprise the replacement of life expired assets are added to the RAB and RAB Floor Limit in the same manner as the original assets and depreciated over the average remaining mine life.

WIK correctly identifies that under the 2011 HVAU, the average remaining life of mines will reach zero in 2032 and that this does not reflect the expected utility of the assets at that time. Rather it is intended to reflect that ARTC will not be able to recover depreciation costs past this point.

6.1.3 Escalation Of Prior Accumulated Depreciation

WIK identifies that ARTC applies escalation to accumulated depreciation from prior periods.²² WIK concludes that this “*may yield significant distortions*”.²³

It is correct that, in the asset base roll forward, ARTC escalates prior period accumulated depreciation. The necessity for this becomes clear when it is understood that the roll forward process has an opening value that is escalated, i.e. the opening value, as modelled, is not the depreciated value but the initial value. This opening value is escalated and any disposals are deducted. From the resulting value, current year depreciation is calculated and deducted along with prior period accumulated depreciation. As the opening asset value is being escalated, it is necessary to also escalate prior period accumulated depreciation in order to avoid a distortion that would otherwise arise. This is to the benefit of Access Holders as, if this was not done, the closing asset value would be higher by this escalation amount and therefore the average value (on which the return is calculated) would be higher. The escalation of prior year accumulated depreciation does not affect the current year depreciation cost claimed by ARTC, it is only used to determine the closing value for the Segment.

ARTC denies that the escalation of prior year accumulated depreciation leads to any distortion and, in fact provides a benefit to Access Holders. It is noted that WIK did not seek clarification on this issue from ARTC.

6.1.4 Shared Maintenance Costs

WIK indicate that they intended to consider shared maintenance costs (termed by WIK as maintenance overheads) as incremental but that insufficient information was provided.²⁴

Shared maintenance costs are largely those costs incurred in managing the maintenance of the network. This includes activities such as the planning of the infrastructure programme and the administrative oversight of the Hunter Valley network. As such, these costs are relatively independent of the specific scope of the network except at the network level. It would be unusual to consider such costs as incremental to any component part of the network or a particular traffic or group of traffics.

ARTC rejects the WIK view that the failure to consider these costs in detail might lead to an underestimate of incremental costs.

6.1.5 Network Control

WIK indicate that they intended to consider network control costs as incremental but that insufficient information was provided.²⁵ ARTC is unaware of what detail WIK was seeking. However, it would

²² Ibid. p.15

²³ Ibid. p.15

²⁴ Ibid. p.37

²⁵ Ibid. p.38

be a rather unusual proposition to consider Network Control costs as being variable to traffics within a particular area in any significant way.

ARTC acknowledges that the resources applied to Network Control may vary, to some extent, in accord with a number of factors, including:

- the complexity of the network;
- the density of traffic;
- the specifics of the infrastructure;
- the number and type of interfaces with other networks and ingress/egress points (e.g. private sidings, balloon loops, other networks);
- intensity of maintenance activities and other interactions with the network; and
- the nature of the safeworking system (i.e. signals or other means of providing authority to occupy or traverse the network).

While variations in these factors may result in a different structure and resourcing for Network Control, these factors tend not to change substantially even over the longer term. Changes, where they occur, tend to be of a step nature, e.g. the splitting or combining of a control board due to substantial, permanent variations in traffic density or a change in control technology. Such changes tend to occur only infrequently and are a response to a significant change in circumstances.

ARTC believes that it is inappropriate that such costs, or part thereof, would be considered as varying with usage of the network in any significant degree.

ARTC rejects the WIK view that this might lead to an underestimate of incremental costs.

6.1.6 Minor Technical Issues

2011 July To December Depreciation

WIK has identified that the remaining mine life used to depreciate assets acquired between July and December 2011 (**2011 H2**) has been incorrectly applied in the 2012 and 2013 compliance assessment models, the value being 21 years instead of 20.75 years.²⁶ WIK is correct that the incorrect value for assets acquired in 2011 H2 was carried through into the 2013 compliance assessment models.

The error is that a value for depreciation for 2011 H2 assets was included for the first 6 month period depreciation of 1.190% (being 25% of 21 years as the period post commissioning was assumed to be October to December only). The correct value should have been 1.205% (25% of 20.75 years reflecting the assumption of the mid-period commissioning). The resulting difference would be to increase depreciation cost for the 6 month period by \$8,982. The closing value of the RAB Floor Limit would decrease by the same amount.

As the error has been corrected in the worksheets for subsequent years, including in the 2013 compliance assessment model, the effect carries through as a decrease in the accumulated depreciation (escalated each year), impacting the opening and closing values, but does not impact the actual depreciation claimed in subsequent years. Thus the effect for subsequent years, and relevant to the 2013 compliance assessment is to impact the return component of Economic Costs but not depreciation. ARTC's estimate is that correcting the error for the 2013 calendar year will

²⁶ Ibid. p16, 17

reduce the total network value by \$9,283 and reduce the return by \$845 for the total network and \$575 for the Constrained Network (prior to any recategorisation of expenditures resulting from the Draft Determination).

ARTC will remedy this error in the final set of models provided to the ACCC once all other matters have been settled.

Capital Costs Included

WIK states:

“The 2013 calculations [sic] compliance submission includes additions to the RAB of all major CAPEX projects independent of the commission period.”

ARTC does not understand this comment. The confidential spreadsheet documenting the RAB/RAB Floor Limit roll forward provides a table of projects either commissioned during 2013 or which were commissioned in earlier years and for which additional expenditures, in some cases negative adjustments occurred during 2013.

It has been, and remains, ARTC’s practice, consistent with the 2011 HVAU, to include any asset commissioned during the period being assessed. The commissioning of an asset occurs when that asset is in a state that it is ready to be used in operations. It is quite often the case that this may occur before the final construction has been completed and where this occurs, the additional expenditure incurred after commissioning is recognised in the asset base in the period in which it is spent. On some occasions, the actual cost of the asset may be adjusted downwards after commissioning and the inclusion of the asset in the RAB/RAB Floor Limit. For example, amounts may have been accrued that were included in the commissioned value but subsequently the actual cost may be lower than the accrued value. In such cases a negative amount is added to the RAB/RAB Floor Limit in the period where this is recognised.

WIK also states:

“The 2012 calculations include only additions to RAB of projects commissioned between 01/01/2012 and 31/12/2012 and did not include additions to RAB (at 31/12/2012) from projects commissioned prior to 31/12/2011.”

ARTC does not understand this comment. All projects commissioned between 1 January and 31 December 2012 were included in the RAB/RAB Floor Limit calculations for the 2012 year along with additional costs/adjustments for previously commissioned projects. It is possible that WIK may have misconstrued additional information provided in the confidential spreadsheet relating to amounts labelled ‘work in progress’ for projects not at that time commissioned.

WIK further commented:

“The compliance submission for the compliance period H2 2011 (as of March 2013) lists major capital expenditures of \$ 14,106,878 in Line Segment 966 (Project 692260 - Burilda Passing Loop Phase 6) which are not included in the calculation of the RAB Floor Limit although the worksheet “Summary all major Projects” states that this value is added to the RAB.”²⁷

It is assumed that the WIK reference to the Burilda Passing Loop is a reference to an entry in a supporting worksheet in the confidential spreadsheet rather than the actual compliance submission. ARTC was unable to find the reference in the actual submission itself. Burilda is in the part of the network north of Gap (termed in the spreadsheet as PZ 4) and in 2013 was not part of the network

²⁷ Ibid. p.17

covered by the 2011 HVAU, though it was part of the network added into PZ 3 as of 1 January 2014. As such, it would not be correct to add the Burilda Passing Loop into the RAB/RAB Floor Limit for the 2013 compliance assessment and ARTC did not include this project, notwithstanding that the supporting spreadsheet does list that project and several other PZ 4 projects not at the time commissioned. None of the PZ 4 entries impact on the 2013 compliance assessment and this does not constitute an error, though it is understandable that this might have been confusing. It is noted that WIK did not seek clarification from ARTC with regard to the matters mentioned.

6.2 E3 Advisory Report

ARTC is concerned that many of the conclusions reached in the WIK report appear to be of a subjective nature. The WIK report does not provide evidence of reliance on relevant standards or codes of practice that might have informed the judgements presented. Nor does it provide any other background that might inform a reader of the correctness of the judgement except for brief comments that are inadequate to fully support the conclusions drawn.

As a result of these concerns, ARTC engaged E3 Advisory to review the WIK report and other relevant documentation to gain a second opinion that would give ARTC confidence as to the appropriate characterisations of the items in question.

E3 Advisory is an experienced engineering consultancy with substantial experience of Australian railways, including specific experience with the Hunter Valley heavy haul network. Their report is provided as Attachment 1.

6.3 Treatment Of Maintenance Costs

WIK identified nine maintenance tasks where they judged that the proportion that should be classified as variable was different to ARTC's value in the 2013 compliance submission. E3 Advisory has reviewed the maintenance tasks and the values of variability assigned by ARTC and WIK and formed their own assessment. E3 Advisory have provided a more detailed explanation of these maintenance tasks and variability in their report. Table 2 provides a comparison of the WIK and E3 Advisory assessments of the variability.

Table 2: Comparison Of Variable Maintenance %, WIK & E3 Advisory Assessments Against ARTC Compliance Submission

Task	ARTC 2013 Compliance	WIK	E3 Advisory ^{#1}
163 Defect removal	75%	90%	↓50%
168 Minor rerailing	75%	90%	↓50%
171 Rail grinding	75%	90%	↓75%
172 Turnout grinding	75%	90%	↓75%
187 Turnout steel component replacement	75%	90%	↔90%
203 Maintenance resurfacing	75%	90%	↓50%
205 Turnout resurfacing	75%	90%	↓75%
226 Pad replacement	50%	75%	↓50%
286 Ballast cleaning	75%	90%	↓50%

#1 The arrow denoted the direction of E3 Advisory's assessment compared to WIK's.

As the judgements made by E3 Advisory are supported by more detail and are consistent with the underlying logic, ARTC is willing to adopt the E3 Advisory values as set out in Table 2. It is noted that the impact of the WIK assessment would be to increase Direct Costs (i.e. variable maintenance) to PZ 3 traffics in PZ 1 by \$0.5m to \$3.0m compared to the \$2.5m applied by ARTC in the 2013 compliance submission. E3 Advisory's estimate would result in a slightly lower value of \$2.4m.

6.4 Major Capital & Interest During Construction

6.4.1 Difficulties With WIK Treatment Of Major Capital Projects

The WIK report describes the process they have undertaken to determine the incremental costs that should be applied to PZ 3 traffics in PZ 1. Their analysis covers major capital and interests costs totalling \$1,010m. Of this, WIK have determined that \$803m (80%) is incremental. The allocation of these costs via GTK and Train Km allocators accounts for \$11.3m out of the total \$14.6m (77%) incremental costs claimed by WIK as applicable to traffics originating from PZ 3. Clearly this is a critical area of analysis in determining the outcome.

The discussion provided by WIK indicates their approach was to consider any project that delivers additional capacity as one that is either wholly or largely incremental.²⁸ ARTC believes this is a misunderstanding of the intention of the term as suggested in the Draft Determination. To accept this would be to accept that almost all major capital projects are incremental – but this indiscriminate view can only be helpful if one is considering avoidability to the whole network, i.e. what is the cost if all the traffic on the network ceases. In essence, this appears to invalidate the concept of a fixed cost. As noted earlier, without consideration of the actual intended beneficiaries then it appears that the concept is unhelpful. The Draft Determination appears to view an expansion of capacity as a general cost that all should pay for in some way and yet justifies this view on the basis that the cost is avoidable.

It is ARTC's view that a cost that is avoidable only to the whole network must be considered as a fixed cost in the context of the 2011 HVAU, on the basis that while some elements of traffic remain the cost is not avoidable (not to mention the issue of sunk costs).

The alternative is that the cost would necessarily be identified with a tranche of traffic in order for the cost to be avoidable at a level less than all users. WIK has not approached the task in this way but made an assumption that capacity increases are applied to all traffics. It remains an open question how the ACCC intends to apply this concept in the face of variations in traffic volumes from different locations.

Appendix A to the WIK report provides commentary on the incremental proportion WIK has applied for each project. In most cases the commentary is that the project is required for higher network capacity. From the report and the WIK model, there is no indication that WIK has made any effort to identify what capacity the project is meant to provide or for whom. There is only a cursory explanation provided as to any assessment of other reasons why a major capital project might have been undertaken or these alternative benefits.

It is ARTC's view that the result is a simplistic view of the requirements of the network and the reasons for particular projects. From all appearances, WIK have taken the view that if a project looks like it may result in more capacity, then it must have been undertaken as a capacity expansion project. Therefore, it must be an incremental rather than a fixed cost.

²⁸ Ibid. p.32

As set out in the case study in section 5 of this submission, the reasons for a project or groups of projects are complex and often interdependent. It is simply not credible to assert that a particular project is required for capacity expansion without a full and thorough consideration of the circumstances surrounding the decision to invest in the network at a particular time and for a particular project. As noted above, to regard a project as being incremental surely requires the identification of the specific beneficiaries and any other reasons why the project would be undertaken before coming to a conclusion that an element of the cost should be treated as incremental.

WIK and their engineering consultant TÜV Rheinland have not discussed with ARTC the requirements for each project, nor even engaged in a meaningful discussion regarding the complexities of the operation of the network and the interactions between the various components. The WIK report lists the parties consulted.²⁹ From this report it is striking that WIK did not consult with the HVCCC.

The HVCCC is responsible, *inter alia*, for the long term planning of the coal chain and plays a central role in determining infrastructure enhancements, including where these are required for additional volumes on the rail network. To not engage with the HVCCC in order to gain a proper understanding as to how the rail network interacts with other elements of the coal chain and to gain information on how the major network investments have impacted on the coal chain would appear to be a significant flaw in the study's methodology and requires explanation. This is particularly so given the relationship between the coal terminals, cargo assembly and network capacity utilisation discussed above. To not account for this impact provides a cross-subsidy to high load factor Access Holders and further challenges the conclusion that 80% of costs are incremental in the sense used in the Draft Determination.

6.4.2 E3 Advisory Assessment Of Major Capital Projects

Given ARTC's concern with the treatment of major capital costs by WIK, ARTC asked E3 Advisory to conduct their own analysis. The result is included in E3 Advisory's report at Attachment 1.

E3 Advisory conducted its assessment on the basis of the following factors:

- 1) ARTC's investment framework for major projects;
- 2) the role of the annual Hunter Valley Corridor Capacity Strategy which outlined requirements for future major investments in the network;
- 3) ARTC's internal governance processes in approving projects;
- 4) the role of the RCG, and prior to July 2011 RIG, in the project endorsement process;
- 5) the stated primary and secondary benefits of specific projects identified for PZ 3;
- 6) actual and forecast growth in contracted capacity volumes by Pricing Zone; and
- 7) interrelationships between projects where these were apparent.³⁰

Unlike the WIK analysis, for the major projects, E3 Advisory have assessed the proportions of projects that could be reasonably identified as having been undertaken specifically for PZ 3 Access Holders. This is a very different approach to the WIK analysis which only seeks to identify a project as having provided additional capacity to the network as a whole. Note that in the analysis of both

²⁹ Ibid. pp5-6

³⁰ Attachment 1, E3 Advisory Report p.26

WIK and E3 Advisory, the application of incremental proportions to interest during construction would be the same as the allocation for the underlying major project.

The results of E3 Advisory's review are set out in Table 3 in comparison to values proposed by WIK.

Table 3: Comparison Of E3 Advisory Assessment Of Increment Proportion To WIK Report

Project No. & Description	WIK Incremental %	E3 Advisory Incremental %
5255 Maitland to Minimbah 3rd Road Stage 2	100%	↓0%
5811 Nundah Bank 3rd Road	100%	↓0%
3858 Maitland to Minimbah 3rd Road Stage 1	100%	↓0%
3579 Antiene to Grasstree Stage 1 Duplication	100%	↓25%
3884 St Helliers to Muswellbrook Duplication	100%	↓10%
3584 Bi-Directional Signalling Maitland to Branxton	100%	↓0%
6928 Drayton Junction	100%	↓0%
8665 No. 3 Departure Road Kooragang	50%	↓0%
3468 Newdell Junction Upgrade	100%	↓0%
6156 Maitland Junction/CBI	100%	↓0%
8666 Kooragang Bypass Road Realignment	100%	↓0%
3578 Muswellbrook Loop Extension	100%	↓10%
3575 Minimbah 80 kph Running Stage 1	100%	↓0%

In E3 Advisory's assessment, most of the major capital projects identified by WIK as being incremental would not be incremental to PZ 3 traffics. Of the \$803m allocated as incremental by WIK and spread over all Access Holders using the relevant Segments in PZ 1, E3 Advisory would allocate \$13.8m as required specifically by PZ 3 Access Holders with the remainder providing either additional capacity required by Constrained Network Access Holders or providing efficiency benefits to all users. WIK's analysis would result in \$88.3m in incremental costs for major projects and IDC, of which \$11.3m would be allocated to PZ 3 Access Holders. Under the E3 Advisory analysis, a total of \$1.1m would be identified as incremental costs applicable to PZ 3 Access Holders.

6.5 Corridor Capital

Corridor capital is generally the replacement of life expired assets. This is capital required to keep the network in a fit for purpose state. To properly apply an incremental capital approach to this, it would be necessary to identify the intended beneficiaries of the original investment and the proportion of the asset that each was intended to bear, and ascribe the replacement assets to these beneficiaries in the same proportions as the original asset. This would be highly impractical.

Again, WIK have taken a different approach, and one which seems inconsistent with the purpose of ascribing a capital cost as incremental in the sense that their choices are made in relation to the variability of the consumption of the asset, rather than the initial need for the asset. As throughout their assessment, this seems inconsistent with the concept that the asset is needed in addition (or avoidable because of) a particular tranche of traffic. Rather, their approach is one that would normally be taken if one was merely allocating a fixed cost between users. The following example demonstrates:

Minor Capital Project 0916M9 - Turnout Renewal with 60kg Rail and concr [sic]: WIK's comment *"We assume that the need for turnout renewals with an upgrade to 60kg rails is more related to volume rather than time. Therefore we assessed a cost variability of 75%."*³¹

WIK conclude from this that the turnout renewal should be counted as 75% incremental. Putting aside whether or not ARTC agrees with this assumption, the point is that the wearing out of the asset and upgrading the rail weight due to usage over the long run does not make that investment incremental in the sense that is being used in the Draft Determination. The turnout would be incremental in the sense proposed in the Draft Determination if it was added to provide additional capacity to the network. But this is not the sense in which WIK has made the classification. The sense used by WIK is that the turnout is being consumed and that 75% of the cost can be allocated through a measure of consumption. This says nothing to the requirement for the turnout at all. In fact, this particular project was in Segment 916, a Segment used by most coal traffics as an entry point to the Carrington coal terminal at Port Waratah. Whether or not any particular tranche of traffic exists, this turnout is essential to access the terminal. To say that 75% of the cost of renewing the turnout is incremental is a misunderstanding of the use of the term in the Draft Determination. As long as any traffics require to enter Carrington coal terminal, this turnout will be required.

As with Major Projects, ARTC could only accept that a project had some portion that was incremental to a particular element of traffic after consideration on a case by case basis. Given that Corridor Capital costs contribute \$0.3m to the amount excluded from the stand alone cost of the Constrained Network, ARTC contends that such a long and detailed analysis would be prohibitively expensive and time-consuming compared to the potential benefit.

E3 Advisory has provided a more comprehensive explanation of the 11 types of corridor capital tasks for which WIK provided a different percentage of variability to ARTC's 2013 compliance submission. Table 4 provides a comparison of the WIK and E3 Advisory's assessments of the tasks that could be considered to vary with usage by major category where they differ. E3 Advisory's analysis in this instance is in the same context as their analysis of maintenance tasks and the proportion of variability is at a general level rather than proportion applicable to the PZ 3 traffics only. The intention of E3 Advisory for this portion of the analysis is to assess the percentage allocations made by WIK as to the consumption of the asset rather than to form a view as to whether the asset is incremental to PZ 3 traffics.

³¹ WIK op. it. Appendix A p.55

Table 4: Comparison Of Corridor Capital % Incremental, WIK & E3 Advisory Assessments Against ARTC Compliance Submission

Task	ARTC 2013 Compliance	WIK	E3 Advisory #1
Rerailing	0%	90%	↓50%
Points machine replacement	0%	50%	↔50%
Signalling system investments/upgrades	0%	50%	↓0%
Track strengthening/upgrading	0%	75%	↓0%
Turnout renewal with 60kg rail	0%	75%	↔50%
Radio upgrade, additional channel	0%	25%	↔25%
Track pad replacement	0%	75%	↓50%
Flash butt welding	0%	75%	↓50%
Repair of signalling equipment (relay boards)	0%	75%	↓0%
Installation of rail lubricators	0%	50%	↓0%
Upgrading of structural deficiencies	0%	75%	↓0%

#1 The arrow denoted the direction of E3 Advisory's assessment compared to WIK's.

As discussed earlier in this submission, ARTC is of the view that, regardless of the consumption of an asset through use, there are sound reasons that it would be incorrect to treat elements of corridor capital as avoidable and allocated in the sense proposed by WIK. Notwithstanding this, if the ACCC is determined that capital should be treated as avoidable rather than fixed, then ARTC is willing to adopt the E3 Advisory values as set out in Table 4.

The assessments made by E3 Advisory are supported by more detail and are consistent with their underlying logic and therefore, in ARTC's view, are more likely to reflect the true nature of the consumption of the asset.

6.6 Allocation Mechanism

WIK allocate the incremental costs identified on the basis of actual GTK and Train Km. This is inconsistent with a claim that this is correctly assigning the causes of an incremental cost. This is an allocation method that would be appropriate if the costs varied more or less directly with usage. In such a case there would be a (more or less) direct relationship between the consumption of the asset and the consumer. It would also potentially be appropriate if this was an allocation of fixed costs, though ARTC uses contracted GTK and Train Km for this purpose rather than actual usage. In this case the allocation is about using a fair method for the allocation of fixed costs rather than attempting to match actual usage.

However, it is difficult to understand that it would be appropriate for the allocation of indirect costs, such as capital related costs, that are supposedly incremental to a particular traffic or group of traffics in this way. It might be appropriate to allocate the costs in this way to traffics within the group to which the costs belong, but not across all users. It will be recalled that the costs being spread are depreciation and return on capital, not an operating expenditure such as a maintenance cost. Given the treatment of assets under the 2011 HVAU, the fact that the useful life of a capital cost is consumed in part (or in whole) due to actual usage does not affect the depreciation and return calculation over the life of the asset. What is being proposed is not a reflection of the

consumption of the asset but the allocation of a set of costs that are fixed in the asset base until such time as the asset is fully depreciated.

ARTC would expect that, if it is necessary to separately account for a sunk or indirect cost associated with a particular traffic or group, it would be necessary to assign the cost to that traffic or group. The WIK analysis does not do this, it merely labels a cost as incremental and then assigns it across all coal users of the relevant Segments. This appears to misunderstand the purpose of identifying the cost as incremental in the sense applied in the Draft Determination.

To carry this issue further, a capital cost identified as incremental, and therefore identified with some additional volume (or avoidable if that volume disappears) would be incremental on the basis of a set of parameters at the point in time that the investment decision is made. It would be necessary to allocate the costs to the relevant traffic or group on the basis of those parameters. It would be wrong to allocate the costs on a movable basis such as volumes (either contracted or actual) which may vary over time. WIK's analysis is for one year only. However the use of actual volumes and no identification of the volumes causing the investment suggest that the ACCC expects that the allocation will vary with actual usage from year to year. That is, other things being equal, the stand alone costs for the current Constrained Network will vary each year dependent on the variation in use of the incremental cost components, including the use of those assets by unconstrained traffics. This cannot be what is intended as reflecting the avoidable cost of elements of the network.

ARTC could not accept the allocation of incremental costs on the basis as proposed by the ACCC as an appropriate recognition of incremental costs.

6.7 Summary Of Incremental Cost Assessments

Table 5 provides a summary of the allocation of incremental cost (Direct Cost in the case of ARTC's 2013 compliance submission) as discussed in this submission.

Table 5: Summary Of Assessments Of Direct & Incremental Costs \$m

	ARTC	WIK	E3 Advisory
Variable Maintenance (Direct Cost)	2.5	3.0	2.4
Corridor Capital (Minor Capital)		0.3	0.2
Major Project & Inter During Construction		11.3	1.1
Total	2.5	14.6	3.6

Given the substantial differences between the WIK and E3 Advisory assessments, ARTC suggests that this highlights the difficulty in arriving at an appropriate recognition and allocation of incremental costs and supports ARTC's view that the matter is one that it will be difficult to arrive at a principle based solution that is capable of being implemented at reasonable cost.

7 Conclusion

ARTC recognizes that a number of stakeholders and the ACCC have raised concerns that the current processes give rise to a perception that a cross-subsidy exists. However such a view has not been clearly demonstrated by WIK and its simplistic ex-post averaging methodology. ARTC has engaged E3 Advisory to develop an approach that reflects the complexity of the Hunter Valley's coal chain. To the extent that the ACCC continues to view it appropriate to include capital costs in an assessment of incremental costs, ARTC is willing to work constructively with the ACCC to resolve

these issues and develop a methodology based on the principles established in the E3 Advisory report. ARTC believes that this approach would provide a solid base to address the ACCC's core issues set out in the Draft Determination; albeit that conceptual concerns remain and ARTC maintains that its current approach is consistent with the provisions of the 2011 HVAU.

APPENDIX A EXTRACT FROM ARTC 2009 & 2011 HUNTER VALLEY CORRIDOR STRATEGY DOCUMENTS

The following has been extracted from the ARTC 2009 Hunter Valley Corridor Strategy pages 13-14. It discusses the requirement to construct an additional track (a third road) up the Minimbah and Nundah banks.

A.1. THE ISSUES

Between the ports and Muswellbrook there are only two 'plain track' sections of the coal rail network for which the minimum headway between loaded coal trains is more than eight minutes:

- The 'Minimbah Bank', which climbs from just south of Muddies Creek to a crest just south of Minimbah;
- The 'Nundah Bank', from Glennies Creek to a crest on the line just south of Camberwell Junction

Headways on Allandale Bank were previously 10 minutes but were reduced to 8 minutes in conjunction with the Minimbah-Maitland bi-directional signalling project. At this headway, capacity will not become constrained until 2015. The minimum headways for loaded coal trains on the Minimbah and Nundah banks were originally around 17 and 20 minutes, respectively. These headways were reduced to approximately 14 and 16.5 minutes with the introduction of 80 km/h approach speeds to the two banks in January 2007.

A.2. MINIMBAH BANK

Although Minimbah bank has shorter headways than Nundah bank, and hence greater nominal capacity, its true capacity will inevitably be constrained by the Nundah bank configuration. Trains that operate over Nundah bank can be no closer than 16.5 minutes apart. Trains exiting the Mt Thorley branch are not at the full 80 km/h speed and hence their transit time up the Minimbah bank is slower than mainline trains, also increasing the headway. Consequently, the effective headway on Minimbah bank is also around 16.5 minutes.

The current configuration on the three banks provides sufficient theoretical capacity to last until NCIG Stage 1 ramps-up to around 10 mtpa, which is assumed to be in Q2 2010. At this time the capacity of Minimbah bank will be reached. The 2007 – 2012 Strategy recommended that a third road be constructed on Minimbah bank with completion in late 2009. ARTC has now secured industry support to proceed to construction of a new track in the loaded (Up) direction in the existing corridor on a reduced (1 in 100) grade. The current expectation is that this third road will be available in Q2 2010. As the timing of the ramp up of NCIG Stage 1 has moved back since the 2007 – 2012 Strategy, the revised Minimbah Bank Third Road timing will still ensure adequate capacity.

Minimbah bank is not expected to become capacity constrained again in the loaded direction before 2018. The empty (down) direction reaches capacity in 2015. However, it is expected that there will be sufficient spare capacity in the up direction to accommodate the overflow of down direction trains using the existing bi-directional capability of what will become the centre road.

The primary benefit of a reduced grade is that the track would climb to a lower maximum elevation. Transit time and fuel consumption are both a function of the amount of energy required to lift a given

mass to a given elevation. Accordingly, a reduced gradient does not in itself have much effect on operational performance if the train configuration remains the same, but a lower maximum elevation will both improve transit time and reduce fuel consumption. In addition, the reduced grade of 1 in 100 means that trains can be brought to a stand on the new track with minimal risk of them not being able to restart. Accordingly it is intended that up to three trains will be able to be held on the third road while a passenger service overtakes.

A.3. NUNDAH BANK

The capacity of Nundah bank is reached in Q1 2012 if there is no port capacity constraint and Q3 2012 under the assumed port capacity expansion program. However, demand is very close to capacity for 2011. Two options are available to increase capacity on Nundah bank:

- Re-signalling of the current track to further reduce headways for loaded coal trains.
- An additional track (third road).

Reducing headways would be achieved by reducing the distance between signals and providing additional signal indications. This allows coal trains to be more closely spaced while ensuring that fast passenger trains and other freight trains continue to have adequate braking distances. Fundamental to this option is that the signal spacing will allow two coal trains to be on a bank at the same time, thereby increasing the capacity of the bank. However, if a train is required to come to stand on the bank for any reason there is a risk that it might not be able to resume its climb from a standing start, with the consequence of significant operational delays.

While in theory all the train types using the Nundah bank are capable of restarting, there are divergent views about the level of risk that this type of operation creates. Provision of a third road allows alternate trains to be directed to opposite tracks, effectively doubling the capacity. This option would also:

- Allow two trains to be on the grade without the risk of the second train needing to come to a stand.
- Provide greater recovery flexibility if a train stalls on the grade.
- Reduce the impact of the capacity “shadow” caused by passenger trains, by allowing passenger services to overtake coal trains on the grade, where the speed differential is greatest.
- Permit re-sequencing of coal trains if this is required.

10-minute headways on Nundah bank would provide adequate capacity through to 2015.

However, the 10-minute headway option is a less than ideal solution with some risk attached. Given the additional benefits of a third road this is considered the first best option and is therefore recommended. It is also recommended that it be pursued with a view to completion by Q3 2012.

It is noted that Nundah Bank 3rd Road is also discussed in the 2011 document. This discussion effectively replicates the 2009 text and is not repeated here.

Extract from 2011 Hunter Valley Corridor Strategy page 16. It discusses the requirement to construct an additional track (a third road) between Minimbah and Maitland.

A.4. MINIMBAH—MAITLAND THIRD ROAD

The long section of track between Minimbah and Maitland carries the highest volume on the Hunter Valley network and is constructed on relatively poor formation. As a result it requires a significant maintenance effort, which is a major contributor to interrupting the continuous flow of trains. The bi-directional signalling project completed in 2009 eased the effect of maintenance on this section, but as volumes grow it becomes increasingly difficult to make use of the opposing direction track.

To provide a better solution, a third track between Minimbah and Maitland, connecting to the Minimbah bank third track, was proposed. Though this track is technically not required for capacity purposes, it provides the least cost method of providing incremental capacity to the network from an holistic perspective. In addition, it will provide valuable opportunities to queue and resequence trains during disruption.

This project has now moved with industry support into Phase 5. Following a review of the scope as part of Phase 2, a decision was taken to move forward on the basis of a reduced scope that provides for two sections of third track, excluding the section between Greta and Branxton. The excluded section is approximately 5.5km long and eliminates the need for costly work at both Greta and Branxton Stations and associated track slews, as well as the replacement of the Nelson Street Bridge. The third track has also been cut back by 1.2 km at the Maitland end, to the north of Wollombi Road. This removed the need for a significant bridge over Wollombi Road and Stoney Creek, a retaining wall, and a significant relocation of the Jemena Gas main. The sections where a third track is not going to be built will have the existing loaded direction track upgraded as part of the scope so as to minimise the requirement for maintenance going forward.

The project will now be delivered in stages (Minimbah – Branxton and Greta – Farley) with capacity available from Q4 2012.



**Submission To The ACCC
In Response To The Draft Determination Regarding
ARTC 2013 Compliance Assessment**

ATTACHMENT 1 E3 ADVISORY REPORT