AUSTRALIAN RAIL TRACK CORPORATION LTD

AUSTRALIAN RAIL TRACK CORPORATION HUNTER VALLEY COAL NETWORK ACCESS UNDERTAKING

REVENUE ALLOCATION REVIEW

ARTC SUBMISSION TO ACCC DISCUSSION PAPER

August 2014

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1 EXECUTIVE SUMMARY

Key points

- ARTC notes, and supports, the purpose of this review being to assess the level and transparency of information provided to stakeholders on ARTC's current approach to revenue allocation, as stated by the ACCC in the Discussion Paper. Whilst ARTC would welcome specific and targeted feedback as to if and where this could be improved, this submission seeks to demonstrate that there has always been full disclosure and transparency in the HVAU and NSWRAU, including opportunities to raise and address concerns in relevant consultation processes. Key opportunities have been identified during the early stages of the HVAU development and during ACCC consultation ahead of approval of the HVAU in 2011.
- ARTC is however very concerned with the implication that the ACCC could seek to change the current revenue allocation approach, possibly even before the expiration of the current undertaking. ARTC, and other network participants, need a stable and predictable regulatory framework in order to be able to make long term investment commitments.
- The current revenue allocation approach is an outcome of the combinatorial ceiling test. It is not a separate process undertaken by ARTC. Under the combinatorial ceiling test, traffics that are not part of the Constrained Group of Mines do not come under that test and accordingly do not contribute to the common costs specific to constrained segments, until the point at which they also become constrained.
- The ACCC's Discussion Paper suggests that Access revenue is received for a particular Pricing Zone and then allocated by ARTC to other Pricing Zones. As has always been the case, revenue is received for an Access Holder's journey (mine-port and return haul) and this revenue is tested against Floor and Ceiling Revenue Limits under the HVAU. The application of the floor and ceiling tests results in Access revenue being allocated to parts of the Access Holder's journey.
- There are certain legislative requirements common to most Australian rail access regimes and accordingly, broadly similar approaches have emerged, including the concept of floor and ceiling limits and efficient price discrimination. It is evident that most regimes tend not to prescribe how revenue should be allocated. This recognises a need for flexibility as to how fixed costs are recovered, provided the service provider remains within the floor and ceiling limits.

Key points (continued)

- ARTC does not believe that the current approach under the HVAU has any significant impact on competition in the above-rail market, nor does it distort competition in the end product market in the longer run. Instead, it encourages entry and hence the growth and development of new coal basins, which is in the broader public interest as it will maximise the economic value of the State's coal resources. This has historically been a priority of the New South Wales Government and there is no information to suggest that this priority may have changed.
- Prior to 2007-08, Ulan line mines were unconstrained and were unable at the prevailing pricing levels to make a contribution towards the fixed cost of PZ1. Since 2007-08, when the Ulan line mines became part of the Constrained Group of Mines, the application of the ceiling test has resulted in revenue generated from volume growth (and the ability of these mines to pay at prevailing pricing levels) being allocated to recover an increasing share of PZ1 fixed costs (and investments). It could be expected that during this period, investments in capacity in both PZ2 and PZ1 would have been undertaken in order to accommodate PZ2 growth anticipated at the time. ARTC estimates that Ulan line mines contributed around 25% of PZ1 fixed cost in 2012. ARTC considers that the current state of development of the Gunnedah Basin line is similar to that for the Ulan line just prior to 2007-08.
- In suggesting that a change in this approach could be considered, the ACCC alludes to concerns regarding the efficiency and equity of the current approach. This in turn relies on a 'single year' view presented by the ACCC, when instead a longer term, whole of system view needs to be taken (consistent with the horizon of investment decisions and recognised in the regulated mine life).
- As this submission demonstrates, if that long term view is taken, the approach is efficient and equitable. Any change in approach will distort these outcomes, especially when compared with the development of the network historically. This could constrain future industry growth by deterring new entrants, as well as reduce ARTC's investment incentives as it will be less confident that its efficient costs can be recovered.

CONTEXT

Terms used in this supporting document are as per the definitions in ARTC's Hunter Valley Coal Network Access Undertaking accepted by the Australian Competition & Consumer Commission (**ACCC**) on 29 June 2011 and varied on 17 October 2012 and 25 June 2014 (**HVAU**) unless otherwise obvious from the context.

OVERVIEW

ARTC welcomes this opportunity to respond to the ACCC's Discussion Paper reviewing revenue allocation in the Hunter Valley coal network (**Discussion Paper**).

The questions in the Discussion Paper are primarily targeted at stakeholders, seeking feedback on the information ARTC has provided regarding its revenue allocation practices. While ARTC cannot comment from the perspective of stakeholders, ARTC considers it important to also respond to the Discussion Paper, including providing some context to the current revenue allocation practices and the level of information provision and consultation that has occurred in the past.

As this submission demonstrates, the combinatorial nature of the revenue limits and revenue allocation methodology and processes have been highly transparent. Further, while the focus of the Discussion Paper is on information provision, it also appears to be questioning whether the current approach results in efficient and equitable outcomes between mines at the current time. In the Discussion Paper, the ACCC has indicated that 'there have now been a number of changes in the industry which may necessitate a revision in approach.'[1]

This suggestion of a fundamental change in the regulatory approach that has been in operation for around fifteen years, and underpins historical and future investment decisions made by ARTC, is of significant concern. A stable and predictable regulatory framework is essential in enabling all stakeholders to make future (long term) investment decisions with confidence.

While ARTC is concerned with **any** change that would reduce the inherent flexibility of the current approach (which, as will be demonstrated in this submission, is necessary to ensure efficient outcomes and maintain ARTC's incentives to invest), the Discussion Paper would seem to infer that the ACCC may seek to challenge ARTC's compliance with the HVAU as early as its compliance assessment for the 2013 calendar year. This would mean that for 2013, a different approach to revenue allocation could be imposed retrospectively to pricing and investment decisions made by ARTC and access holders in that year. That is, there could be a material change in regulatory approach within a regulatory period and not long after the approval of the HVAU.

This submission provides an explanation of ARTC's revenue allocation approach and how it has developed in the context of the New South Wales Rail Access Undertaking (**NSWRAU**) and HVAU. It also addresses:

- the information that is currently provided and has been provided in the past;
- ARTC's compliance with the ceiling test; and
- other matters that ARTC considers is relevant to this review, in response to Question 4 in the Discussion Paper, including the efficiency of the current

[1] Discussion Paper, p6.

arrangements, equity considerations and the likely impact of any change in approach.

ARTC'S REVENUE ALLOCATION METHODOLOGY

Revenue allocation has to be considered within the context of the HVAU Pricing Principles. Consistent with other Australian rail access regimes, charges for Access to ARTC's network must be set such that Access revenue falls between a floor and ceiling revenue limit. This test is a traffic-based test, not a segment-based test, where:

- The **floor test** requires that Access revenue for each traffic operated by an Access Holder over the traffic's journey must at least meet the Direct Cost associated with that traffic's journey over all of the Segments on the Hunter Valley coal network forming part of that journey. The purpose of this is to avoid cross-subsidisation, that is, each traffic must at least cover the costs that would be avoided if it did not use the network.

- The **ceiling test** requires that Access revenue for each traffic operated by an Access Holder over the traffic's journey must be no more than the Economic Cost of all Hunter Valley coal Network Segments required for that journey on a stand-alone basis (as if that traffic was the only traffic on the network). The ceiling test is combinatorial in nature, which means that Access revenue for each and every combination of traffics must be no more than the Economic Cost of all Hunter Valley coal Network Segments required for that combination of traffics on a stand-alone basis. The purpose of this is to prevent the network owner from recovering more than the Economic Cost of providing access to the network, or setting access charges at a level that would encourage inefficient bypass.

As stated above, revenue allocation is not a separate process to pricing. Instead, it is an outcome of the application of the HVAU Pricing Principles or more specifically, the application of the combinatorial ceiling test. In brief, the combinatorial ceiling test is applied as follows:

- The starting point for the application of the test is costs, not revenues. Costs can be either directly identified for each segment on the network or are common network costs that are allocated as per the HVAU.

- Mines and relevant combinations of mines are then identified for testing of Access revenue against the relevant Ceiling Limit. For each mine or combination of mines the following is then determined:

    - total Access revenue received; and

    - the stand-alone Economic Cost for all Segments on the Network used by that mine or combination of mines (which includes all fixed and variable costs).

- The above tests result in the identification of the Constrained Group of Mines and the Constrained Network, which is where Access revenue for services

operated by the Constrained Group of Mines entirely within the Constrained Network, is either closest to, or above the Economic Cost for the Constrained Network.[2] For the 2012 calendar year, the Constrained Network was represented by the coal lines between the Ulan mine and the ports at Newcastle.

- Under the HVAU, unders and overs accounting serves to align the Access revenue for the Constrained Group of Mines with the Economic Cost for the Constrained Network The stand-alone Economic Cost of the Constrained Network excludes Direct Costs associated with traffics that do not serve the Constrained Group of Mines and are not operated entirely within the Constrained Network (e.g. non-coal traffics or traffic servicing a mine that also operates outside of the Constrained Network). Because these traffics operate on parts of the rail network that are outside of the Constrained Network (i.e. parts of the rail network that are not constrained), Access revenue associated with these traffics does not recover the Economic Cost of the rail network utilised by these traffics. They are referred to as unconstrained traffics.

- Access revenue received from unconstrained traffics is then allocated as follows.

    - Where those traffics use part of the Constrained Network, this revenue is allocated to recover any costs of the Constrained Network that are not recovered from the Constrained Group of Mines, which includes the Direct Costs of the unconstrained traffics. This ensures that Access revenue from the Constrained Group of Mines remains aligned to the Economic Cost of the Constrained Network.

    - The remainder of this revenue is then allocated to parts of the journey of the unconstrained traffics outside of the Constrained Network.

    - When the allocation of revenue to parts of the journey of unconstrained traffics outside of the Constrained Network is sufficient to recover the Economic Cost of those part of the journey, then those traffics become constrained (the mine(s) become(s) part of the Constrained Group of Mines and the previously unconstrained parts of the journey become part of the Constrained Network).

    - When this occurs, the application of the Ceiling Limit will ensure that any of this revenue that is in excess of that required to recover Economic Cost over the journey of the now constrained mine will be allocated to the Constrained Network, reducing the extent of the Economic Cost of the Constrained Network to be recovered from the existing Constrained Coal Customers.

Revenue is not received for a particular Pricing Zone or Segment, as the Discussion Paper would appear to suggest. As referred above, there is no allocation of revenue before the ceiling test has been applied. Revenue allocation is a consequence of the proper application of that test.

[2] HVAU, Section 14.1 Definitions 'Constrained Group of Mines' and 'Constrained Network'.

The application of the floor and ceiling limits and the identification and treatment of constrained and unconstrained mines is a longstanding feature of the NSWRAU and the HVAU. A number of enhancements to the pricing framework have been made through time, particularly under the HVAU where a number of changes were made to improve transparency or promote efficiency. However, this fundamental approach to the revenue tests has largely remained unchanged. What has changed is that some of the mines that are in the Constrained Group of Mines were formerly unconstrained mines, and mines that are currently unconstrained can be expected to become constrained in future, assuming the Hunter Valley coal network continues to grow and develop.

INFORMATION PROVISION

As demonstrated in this submission, ARTC has provided considerable information in the past on the operation of the ceiling test and the revenue allocation approach.

This includes the extensive information provision and consultation that occurred in the development of the HVAU. As would be expected, pricing and revenue allocation was an important area of focus for all stakeholders, including the introduction of the loss capitalisation approach.

The ACCC's consultation process for the HVAU spanned over two years from the lodgement of ARTC's initial application in April 2009, which followed earlier consultation with industry in 2008. This earlier consultation included broader industry-wide presentations as well as separate detailed consultation with producers and the coal industry representative body, the Hunter Rail Access Task Force (HRATF). The HRATF is a sub-group of the NSW Minerals Council specifically tasked to represent Hunter Valley coal producer members in regulatory development and consultation. It had a similar role in the development of the NSWRAU as well as subsequent undertaking compliance reviews.

During the consultation on the HVAU, ARTC made it clear that it was not seeking to move substantively from the pricing principles prescribed under the NSWRAU and in particular the floor and ceiling tests and basis for determining revenue limits. Apart from the fact that ARTC considered this approach to be efficient and effective, it was considered important to maintain continuity. ARTC was not aware of any substantial concerns being raised by stakeholders with this approach.

During the ACCC's consultation on the HVAU, and with specific reference to the approach to revenue allocation inherent in the floor and ceiling revenue tests, ARTC provided the following information in its initial application when explaining the combinatorial nature of the ceiling limit under the HVAU. This information was also provided for consultation with relevant stakeholders[3] and to the ACCC[4] in July 2008 during earlier preliminary development of the HVAU prior to ARTC's initial HVAU application.

[3] Letter from ARTC Chief Executive Officer to relevant stakeholders (refer Appendix 3) dated 14 July 2008, and attached documents. Explanatory Guide p42.

[4] Letter from ARTC Chief Executive Officer to ACCC (Acting General Manager Transport) dated 14 July 2008, and attached documents. Explanatory Guide p42.

'Combinatorial pricing approach

Under the combinatorial pricing approach, prices are set within a floor (incremental cost) and ceiling (total economic cost) limit.

Costs for each route are allocated to the relevant route section. In broad terms, revenue is allocated to cover the costs attributable to particular route sections in an order of priority, as follows:

- *incremental costs of all applicable route sections;*

- *up to the ceiling on all applicable branch or feeder (dedicated) route sections; and*

- *up to the ceiling on all applicable shared route sections.*

This approach ensures that the costs of dedicated lines are recovered as a priority. Any additional revenue earned above incremental costs then goes to the feeder lines and then the main lines. The combinatorial pricing approach has two important benefits that ARTC considers are important in the context of the asset roll-forward capitalisation approach. First, it will avoid cross subsidisation between route sections. Second, recovery of capital costs on branch or feeder lines has higher priority than shared lines on the basis these are dedicated lines and, unless these costs are recovered, the lines may close (or not be built in the first place). Accordingly, this approach reduces the risk of under-recovery of costs on dedicated lines, thereby facilitating investment in expanding the network in these areas

As a result of applying the combinatorial approach, capitalised shortfalls on relevant Segments would be recovered from users of those line segments and no other mines. This is essentially a cost allocation process and subsequent recovery of the allocated costs. ARTC recognises the sensitivities surrounding such a cost allocation process, in particular, the allocation of common costs.

Consequently, transparency of the cost allocation process to the regulator will be important to provide comfort to producers and operators that no cross-subsidisation is taking place.'[5]

This aspect of the combinatorial pricing approach was explicitly referenced by the ACCC in its Draft Decision of ARTC's application[6].

Other documents provided publicly by ARTC during the ACCC's public consultation on the HVAU included explanatory guides describing the process used by ARTC to determine Interim Indicative Access Charges proposed as part of the HVAU. These documents provided a detailed description of the development of Revenue Limits under the HVAU, and the application of the proposed combinatorial, stand-alone ceiling test. Included was explicit reference to the recovery of the Economic Cost of the Constrained Network from Access revenue for only those coal traffics that are operated entirely within the Constrained Network, being the Constrained Group of Mines, for the purpose of hauling coal from these mines to the Newcastle ports.

[5] ARTC, Hunter Valley Access Undertaking Application, 23 April 2009, Explanatory Guide, p100.

[6] ACCC Draft Decision

Concerns were raised regarding the origin-destination pricing approach that was a feature of the NSWRAU, including the incentive effects for ARTC and access holders. Accordingly, a number of changes were made with a view to improving incentives for efficient network utilisation and investment, some of which were negotiated with industry. Some of the key enhancements that resulted include: the loss capitalisation approach; recognition of different risk profiles, and hence rates of return, for the constrained and unconstrained segments; incentive-based pricing through definition of indicative services and differentiation for different coal train configurations; the publication of prices; the incorporation of three pricing zones; greater prescription around the definition of costs; increased accountability for ARTC via the TOP rebates; and the process used in the development and endorsement of new capacity.

ARTC considers that the current approach to coal access pricing under the HVAU is a substantial improvement on the previous approach. It has also led to much greater transparency and efficiency in pricing in relation to:

- the determination of revenue limits;
- published prices for all coal train configurations;
- information provision to access holders as part of the annual development of coal access prices; and
- price differentiation to incentivise more efficient network utilisation, based on published principles.

These changes have been made while preserving the efficiencies and benefits of the floor and ceiling approach.

ARTC has sought to demonstrate in this submission that the public disclosure and opportunity for stakeholder consultation during the assessment of the HVAU by the ACCC provided a reasonable basis for effectively informing, and consulting with, relevant stakeholders on the approach to revenue allocation arising from the application of the floor and ceiling tests under the HVAU and NSWRAU, and that the response by stakeholders and the ACCC was such that it was reasonable for ARTC to assume the information provided was sufficient to inform business and investment decisions, and that the practice was not considered to be controversial.

ARTC notes that other questions raised in the Discussion Paper afford stakeholders with the opportunity to identify any specific aspects of the practice where stakeholders think that information provided in the past has not been sufficient and where additional transparency may be required. ARTC is unable to respond to these questions, but would be open to relevant and targeted feedback on any specific areas of concern that stakeholders may have and suggestions for improvement.

COMPLIANCE

ARTC is also concerned that it could be inferred that it has somehow not been compliant with the HVAU, particularly in relation to the roll forward of the

Regulated Asset Base (RAB) and RAB Floor Limit, compliance with the Ceiling Test and the management of unders and overs balances.

Compliance reviews have been completed under the HVAU for calendar years 2011 (six months only) and 2012. They were also previously completed under the NSWRAU since 2004-05. This process requires full disclosure of the operation of the relevant mechanism and how they have been implemented by ARTC. This includes disclosure to the regulator of calculations (such as the determination of Economic Cost), which is contained in a financial model that is confidentially supplied to the ACCC on an annual basis. There is also a significant amount of information pertaining to the roll-forward of the respective asset base, determination and variation in relation to Economic Cost, outcomes of the Ceiling Test and unders and over accounting made available in public versions of ARTC's submissions to the regulator.

Over the course of these compliance reviews a number of stakeholders have been consulted including rail operators, producers and the NSW Minerals Council. In the most recent 2012 review, the ACCC has explicitly drawn the attention of stakeholders to the application of the ceiling test for the Constrained Network and Constrained Group of Mines[7].

During this period, ARTC does not believe any query was raised, or any further clarity was sought, in relation to the summary of the results of the ceiling test model for the Constrained Network and the nature and application of the ceiling test to that network. This is similarly the case on review of the five submissions received in response to the 2012 assessment.

In November 2013 ARTC provided additional confidential information to the ACCC to confirm the ACCC's understanding of what it considered appeared to be a 're-allocation' of access revenue between users in certain segments of the network. The ACCC has now accepted ARTC's compliance with the HVAU for the 2012 year.

EFFICIENCY OF THE CURRENT ARRANGEMENTS

To the extent that the ACCC might be contemplating change to the current pricing and revenue allocation approaches, it is necessary to examine if they are efficient. Such an assessment needs to have regard to the overarching objective of the access regime (**the Objects Clause**), as stipulated in the *Competition and Consumer Act 2010 (***CCA***)*, which is to:[8]

> *…promote the economically efficient operation of, use of and investment in the infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets…*

Consideration must also be given to the Pricing Principles in the CCA, which, amongst other things, enable ARTC to recover sufficient revenue to cover its

[7] ACCC Determination, ARTC's compliance with the financial model and pricing principles in the HVAU for January – December 2012, 21c March 2014,

[8] Cl. 44AA(a) of the CCA.

efficient costs (including a return on capital), as well as engage in price discrimination where it aids efficiency.

These legislative requirements are common to most Australian rail access regimes and accordingly, broadly similar approaches have emerged, including the concept of floor and ceiling limits and efficient price discrimination. It is also evident that most regimes tend not to prescribe how revenue should be allocated. This in turn reflects the recognition that there is a need for flexibility as to how fixed costs are recovered provided the service provider remains within the floor and ceiling limits.

Investment in network infrastructure tends to have a long economic life and hence a long capital recovery period. Investment decisions are therefore made over long timeframes. Most investments are intended to provide increased capacity for the Hunter Valley coal 'system' (or coal chain) rather than for a particular group of users. This is supported by the cooperative approach to investment planning in the Hunter Valley.

Over this long investment horizon, the structure of the industry will continue to develop and evolve (and perhaps even contract), as will the users of the infrastructure and the 'beneficiaries' of expansions that have been undertaken through time. The capacity of users to pay will also change and hence so may the constrained and unconstrained segments of the network.

It is therefore necessary to evaluate efficiency over the long term, based on a whole of supply chain perspective. Indeed to assess it based on a 'snapshot' view at a point in time could be misleading.

As shown later in this submission, there are multiple combinations of pricing approaches that satisfy the floor and ceiling limits. While always ensuring that this is maintained, the essence of ARTC's approach is price differentiation between constrained and unconstrained zones, whereby users in the constrained zones make a higher contribution to common costs in these constrained zones than users in the unconstrained zones. Once an unconstrained zone becomes constrained, the contribution to common costs made by those users will increase. Users in the constrained zone only make no contribution to the common cost of the unconstrained zone.

As shown above, this revenue allocation approach is a consequence of the application of the combinatorial ceiling test. No specific revenue allocation decisions are made prior to, or independent of, the application of that test.

ARTC considers that this is an efficient form of price discrimination, as permitted under the CCA. This is because it is driven by differences in capacity to pay. This is consistent with the principle of Ramsey pricing (given the relationship between willingness to pay and capacity to pay), which has been acknowledged as an efficient infrastructure pricing approach, including by the Productivity Commission.

Due to the nature of the Hunter Valley network, investments occur in specific parts of the network that will have flow on benefits for all users of the Hunter Valley coal chain. The benefits are therefore socialised in many cases, whereas recovery of the

cost of those investments is not. ARTC would expect that in the long run, the costs and benefits will balance out so that all coal users will pay a fair share for Hunter Valley network investment as and when they can. ARTC has sought to demonstrate that a reasonable balance has occurred historically and is expected to occur in the future in section 8 of this submission.

Retaining sufficient flexibility to allocate revenue based on capacity to pay reduces the risk that ARTC is unable to recover a full return of, and return on, capital over the long economic lives of its network assets. Under the Pricing Principles in the CCA, ARTC is entitled to recover the full economic costs of the investment it makes, including a return on capital.

While ARTC's loss capitalisation approach is an important mechanism for recognising losses that might be made early in the life cycle of a network, deferring recovery of a substantial proportion of its fixed network costs using this mechanism does not mitigate its stranding risk as ARTC still needs to be able to eventually recover those capitalised losses via access charges. In any case, loss capitalisation only applies in unconstrained zones. Accordingly, this mechanism could only be used if those investment costs could be solely attributed to users in that unconstrained zone. As shown above, the investments made have had wider supply chain benefits.

ARTC's current approach has no impact on competition in the above-rail market. It also does not distort competition in the end product market. Instead, it encourages entry and hence the growth and development of new coal basins, which is in the broader public interest as it will maximise the economic value of the State's coal resources. This has historically been a priority of the New South Wales Government and there is no information to suggest that this priority may have changed.

Ensuring that ARTC can recover its efficient investment costs is not only in its legitimate business interests, but also incentivises efficient and timely network investment, consistent with the Objects Clause. This approach maintains the incentive for ARTC to make investments at the right time, in the right place and in the right sequence, whether those investments create new network capacity or facilitate operational improvements that increase the utilisation of the existing infrastructure. Importantly, these investments are endorsed by Hunter Valley producers via the Rail Capacity Group (RCG).

EQUITY

ARTC does not agree that the approach it applies is inequitable, which seems to have been inferred by the ACCC based on a short-term view taken at a point in time. As noted above, it is necessary to evaluate efficiency over a longer time frame, based on a whole of supply chain perspective. This can be illustrated by examining the nature of investments that have been undertaken in the Hunter Valley, including the more recent (and planned) expansions as referred to by the ACCC.

For example, the investments occurring in the Gunnedah Basin to enable PZ3 (**PZ3**) users to operate longer 30 tonne axle load (**TAL**) operations will result in additional capacity being created in PZ1, which will benefit PZ1 (**PZ1**) and Pricing Zone 2 (**PZ2**) users. Further, expansions that have occurred in PZ1 have enabled increased volumes for PZ1 and PZ2 users, not just PZ3.

Figure 1 below plots major network investments against the growth profile in each pricing zone. **Figure 2** and **Figure 3** provide historical and forecast estimates of the contribution towards recovery of fixed costs in PZ1 (including the cost of PZ1 investments) from revenue collected from PZ2 mines and PZ3 mines respectively. These figures have been based on the best available forward forecasts at the time of preparation.

Figure 1 - Hunter Valley Coal Network Volume and Investment Profile

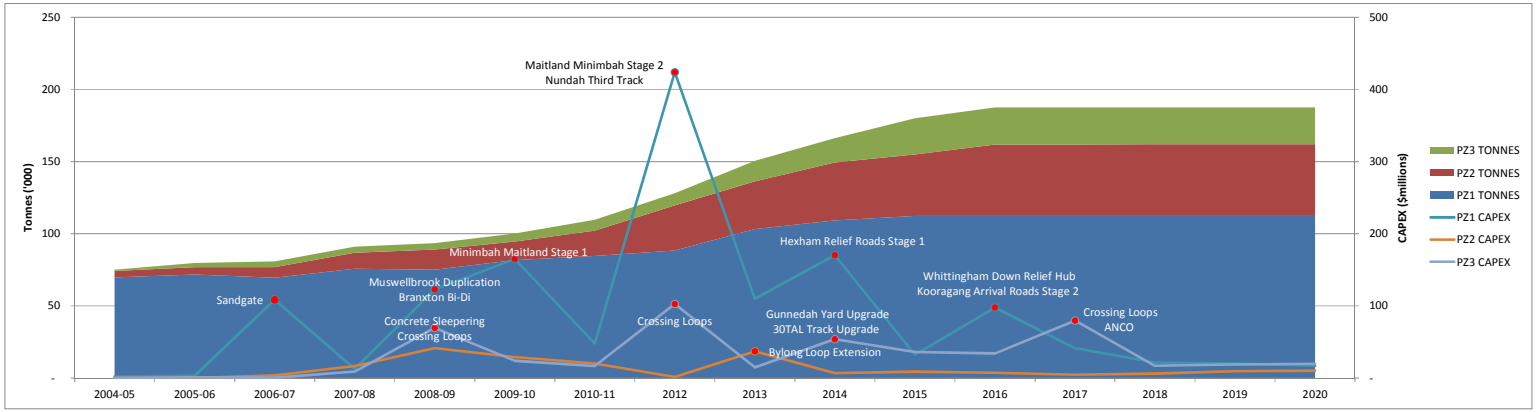


Figure 2 – Recovery of PZ1 Fixed Cost from PZ2 Mines

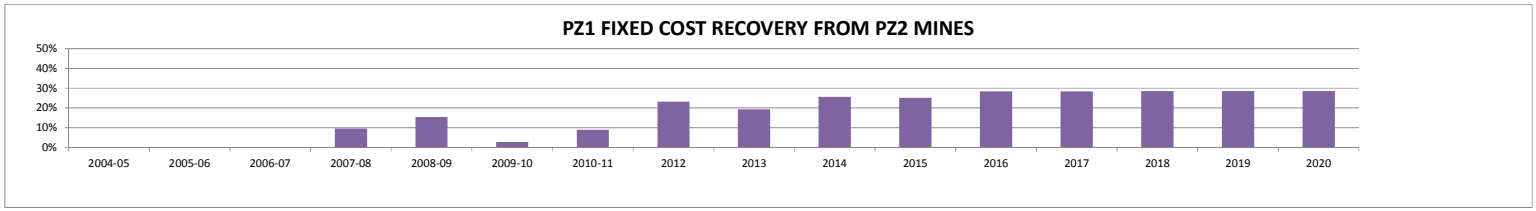
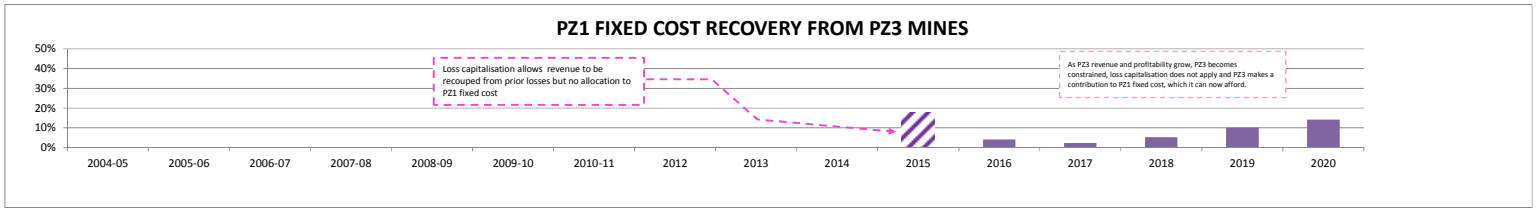


Figure 3 – Recovery of PZ1 Fixed Cost from PZ3 Mines



This shows that there has been significant growth in volumes in all Pricing Zones between 2007-08 and 2013 with most growth in PZ2. Major investments in PZ1 and PZ3 (and to a lesser extent in PZ2) over the period 2008 to 2012 has created the capacity in the system for this growth to date. This shows that all users in all Pricing Zones (and particularly PZ2) could have benefitted from the investments made in PZ1 and PZ3 to date.

Further, over this period, and since the Ulan line mines became part of the Constrained Group of Mines, the revenue generated from the growth in PZ2 volumes (and therefore the ability of PZ2 mines to pay at prevailing pricing levels) has been allocated to recover an increasing share of PZ1 fixed costs (and PZ1 investments) since 2007-08. Prior to 2007-08 when PZ2 volumes were insufficient to generate revenue to recover Economic Cost for PZ2, PZ2 mines made no contribution to PZ1 fixed cost. It could be expected that during this period, investments in capacity in both PZ2 and PZ1 would have been undertaken in order to accommodate PZ2 growth anticipated at the time.

As stated above, over this period, PZ1 and PZ2 mines make no contribution to PZ3 fixed costs. The application of the floor and ceiling revenue limits under the HVAU (and NSWRAU) prevent this. The revenue generated from the lesser growth in PZ3 volumes (and therefore the ability of PZ3 mines to pay at prevailing pricing levels) is yet to be sufficient to recover fixed costs in PZ3, and so is yet to be sufficient to be allocated to recover a share of PZ1 fixed costs (and PZ1 investments) to date. This treatment of PZ3 mines is the same as occurred for PZ2 mines before 2007-08. However, this situation can be expected to change provided the industry remains on its current growth path, just as PZ2 producers now contribute to the recovery of fixed costs in PZ1.

The revenue generated from the growth in PZ3 volumes (and therefore the ability of PZ3 mines to pay at prevailing pricing levels) is expected to be sufficient to recover fixed costs in PZ3 in 2015. In 2015, revenue is expected to be sufficient to recover losses previously capitalised up to 2014. From 2016, continued growth in volumes and revenue is expected to result in revenue being allocated to recover a share of PZ1 fixed costs, initially expected to be around 5% and increasing to 15-20% of those costs, which is broadly aligned with the utilisation of PZ1 by PZ3 mines. By 2020, the combined recovery of PZ1 fixed cost from PZ2 and PZ3 mines is forecast to be around 40-45%.

ARTC has considered the growth and investment profiles shown in Figure 1 over the period 2007-08 to 2020, being the period over which most significant growth and investment in the Hunter Valley coal network has occurred. ARTC considers that this time period is more commensurate with the period over which pricing and investment decisions are made.

As shown at **Figure 1** above, Hunter Valley coal network volumes have grown from around 91million tonnes per annum (**mTpa**) in 2007-08 to 187mTpa projected in 2020. Over this period investment in the Hunter Valley coal network in order to create capacity for this volume growth is around $2billion.

In order to describe the application of benefits of this investment to PZ1 and PZ2, and PZ3, **Table 1** below shows the respective increase in volumes over this period.

Table 1 – Hunter Valley coal network Volume Growth 2007-08 to 2020.

	Hunter Valley Coal Network	PZ1 & 2 Constrained	PZ 3
Volume Growth	97mTpa	75mTpa	22mTpa
% share		77%	23%

As such, in a 'system'-wide sense, PZ3 mines have derived around 23% of the capacity benefits arising from investment in the Hunter Valley coal network over the period 2007-08 to 2020. 77% of the capacity benefits arising from this investment are derived by PZ1 and PZ2 mines.

Table 2 below shows the respective investment in the Hunter Valley coal network over this period.

Table 2 – Investment in the Hunter Valley coal network 2007-08 to 2020.

	Hunter Valley Coal Network	PZ1 & 2 Constrained	PZ 3
Investment	$1.98bn	$1.48bn	$0.50bn
% share		75%	25%

As the HVAU Pricing Principles prevent PZ1 and PZ2 mines from paying for any investment in PZ3, PZ3 mines are paying for at least 25% of the total investment in the Hunter Valley coal network over the period 2007-08 to 2020. When revenue from PZ3 mines is allocated to the recovery of fixed (and investment) costs in PZ1 in the future this proportion will be even higher.

Accordingly, if a long term, whole of system view is taken, the current approach is not only efficient but equitable. Indeed, as shown above and detailed later in this submission, the extent of the cost recovery of investment in the Hunter Valley coal network over the period 2007-08 to 2020 from PZ3 producers is broadly aligned to the relative utilisation of the increased capacity of the network arising from that investment. Any change in approach that reduces ARTC's flexibility could prevent these longer term outcomes from being realised.

ARTC also contends that the existing level of pricing flexibility afforded under the HVAU promotes negotiation of pricing outcomes for Gunnedah Basin mines that result in an effective and equitable balance between its own internal business risks (such as revenue adequacy and investment risk) and broader industry objectives including incentives for efficient utilisation of the network, and encouraging the development and growth of the network.

The unit cost of access for Gunnedah Basin mines is currently around 20% higher on a cents per net tonne kilometre basis. Whilst some of this differential results from the different efficient train configurations used by Gunnedah Basin mines and PZ1 and PZ2 mines, the negotiated outcome for Gunnedah Basin mines is still high compared to regulated pricing for the constrained PZ1 and PZ2 mines. This pricing outcome arises despite PZ1 and PZ2 mines currently paying for the fixed

cost of the Constrained Network and Gunnedah Basin mines currently not contributing towards this cost.

It is ARTC's view that the higher cost of access for Gunnedah Basin mines results from the negotiation of a cost of access that reflects a balance between promoting the development and expansion of the Gunnedah Basin (a cost of access that is competitive in the Hunter Valley market) and the recovery of a reasonable level of the cost of recent investment in PZ3 balance where volume **at this time** is insufficient for full recovery (revenue maximisation).

ARTC considers that the existing pricing levels are equitable and do not result in any adverse competitive outcomes, whilst promoting efficient outcomes in terms of Hunter Valley coal network development and investment.

Placing constraints on the existing level of pricing flexibility will limit the ability of relevant parties to achieve balanced outcomes.

IMPACTS AND RISKS OF CHANGE

As demonstrated above, ARTC is concerned that any change in approach could result in less efficient and equitable outcomes in the Hunter Valley coal network over the longer term.

This review has also prompted significant concerns within ARTC regarding future regulatory certainty, which has the potential to undermine its confidence in the future stability of the regulatory framework and have a detrimental impact on its incentives to invest. Recognising the inherent uncertainty in investing in coal supply chain infrastructure over the long term, the predictability of future revenue outcomes – which is influenced by the stability of the regulatory framework – is important to investors, lenders and ratings agencies.

This submission also demonstrates how a change in the way in which it allocates revenue could have a significant and detrimental impact on the revenue recovery profile for PZ3, reducing the likelihood that this segment will become constrained, which would enable ARTC to increase the contribution that these users make to common network costs.

This not only increases ARTC's exposure to asset stranding risk, which further reduces its incentives to invest, but could result in inefficient and inequitable outcomes for the industry, including when compared with the development of the network historically. If it discourages the further growth and development in the Gunnedah Basin, or deters other new entrants who might initially have a more limited to capacity to pay, it will have a significant and adverse effect on the economic performance of one of the State's, and the country's, most important export industries.

2 INTRODUCTION

In the ACCC's Determination with respect to ARTC's compliance with the financial model and HVAU Pricing Principles for January – December 2012 (**2012 Compliance Determination**) the ACCC indicated that it intended to undertake a public review in which industry stakeholders would be given an opportunity to provide their views in relation to issues such as the provision of information to stakeholders and the methodologies underpinning revenue allocation across the Hunter Valley coal network. The ACCC considers that such a review will assist in increasing transparency and informed decision making.[1]

In relation to this public review, the ACCC released a discussion paper on 29 May 2014 inviting public submissions on the review (**Discussion Paper**).

In inviting public submissions to the Discussion Paper, the ACCC has indicated at Section 1.3 of the Discussion Paper that the primary purpose of the review is to provide transparency to stakeholders as to how ARTC applies the Pricing Principles contained in section 4 of the HVAU when fulfilling its annual compliance obligations under section 4.10 of the HVAU.

The ACCC also indicated questions of particular interest to the ACCC relating to the review contained at section 2.3 of the Discussion Paper. Additionally, the ACCC indicated that stakeholders were welcome to comment on any aspect of revenue allocation under the HVAU.

These questions are detailed at section 3 of this submission, where ARTC seeks to identify and clarify the areas of interest raised by the ACCC in the Discussion Paper, as well as some of the specific matters raised by the ACCC.

At section 4 in the submission, ARTC sets out its understanding of relevant regulatory development of the pricing principles applying to access to the Hunter Valley coal network for coal transport arising from the development and application of a number of regulatory instruments including the HVAU and, before that, the NSWRAU and the NSW Rail Access Regime.

At sections 5 to 9 of this submission, ARTC seeks to respond to what it considers are a number of the key issues raised by the ACCC in the Discussion Paper as follows:

- Transparency (**section 5**);
- Compliance (**section 6**);
- Efficiency of Pricing and Investment Incentives (**section 7**);
- Equity Considerations (**section 8**); and
- Impacts and Risks (**section 9**).

[1] 2012 Compliance Determination, Section 2.5.

3 THE ACCC'S DISCUSSION PAPER

This section examines some of the points made by the ACCC in its Discussion Paper, including observations it makes regarding the current environment and revenue allocation approach. Before addressing the questions in the Discussion Paper, this section will highlight ARTC's concerns with the potential direction and implications of this review, as well as address some possible misconceptions and inaccuracies in the Discussion Paper.

3.1 Areas of Interest raised by the ACCC

In inviting public submissions to the Discussion Paper, the ACCC has indicated at Section 1.3 of the Discussion Paper that the primary purpose of the review is to provide transparency to stakeholders as to how ARTC applies the HVAU Pricing Principles when complying with its annual compliance obligations under section 4.10 of the HVAU.

The Discussion Paper also indicated questions of particular interest to the ACCC relating to the review contained at section 2.3. Additionally, the ACCC indicated that stakeholders were welcome to comment on any aspect of revenue allocation under the HVAU.

These questions include:

1. What information has ARTC provided to stakeholders about its revenue allocation practices?

2. To the extent that ARTC has provided information on revenue allocation, has it been sufficient to understand how ARTC allocates revenue across Segments of the network?

3. Do stakeholders consider they have sufficient information about ARTC's revenue allocation/reconciliation processes to make informed business and investment decisions? If not, please provide reasons why.

4. Please identify and explain any other matters relevant to this revenue allocation review.

The nature of the questions raised by the ACCC in the Discussion Paper, and the above advice, indicate that the ACCC primarily seeks views in relation to matter of the transparency of revenue allocation to stakeholders, and the extent to which stakeholders understand revenue allocation.

This is reinforced at Section 1.1 of the Discussion Paper where the ACCC has advised that:

'*The purpose of this review is to assess the level and adequacy of, transparency of information provided to stakeholders on ARTC's current revenue allocation practices. This purpose also reflects the objectives of the HVAU. Specifically, subsection 1.2(c) of the HVAU states that "the intent of the Undertaking is to… use transparent and detailed methodologies, principles and processes for determining Access revenue limits, terms and conditions".*'

Additionally, as the ACCC has raised a general question seeking comment into any aspect of revenue allocation under the HVAU, it would appear that the ACCC is seeking to widen the review to other aspects of revenue allocation including compliance with the HVAU, and impacts on commercial and pricing efficiency and incentives, and equity considerations.

These wider considerations are reinforced at:

- Section 1.1 of the Discussion Paper where the ACCC has suggested that changes in the industry described at that section, including an increase in coal volumes and investment and the application of loss capitalisation under the HVAU, may necessitate a revision in approach;

- Section 1.1.2 of the Discussion Paper where the ACCC states:

  'The increase in coal volumes has necessitated investment in the network, in part to accommodate the expanding volumes in PZ3. In its 2013 Hunter Valley Corridor Capacity Strategy ARTC noted that 'coal demand on the (Gunnedah Basin) line has already increased significantly and is forecast to continue to increase very rapidly. Considerable increases in capacity continue to be needed to accommodate this growth'. [2]

  In the 2012 calendar year several major projects to create additional capacity in PZ1 were undertaken. These capital projects are likely to become more significant given that traffic traversing the network in PZ1 is forecast to increase significantly in coming years and significant investments in PZ1 are required to accommodate the increased traffic from PZ3 producers.

  In this regard, ARTC has noted that congestion over the network remains a concern[3]*. ARTC has also stated that additional infrastructure is one option to mitigate congestion and enable the full capacity of network to be realised*.'[4]

- Section 2.2 of the Discussion Paper where the ACCC states:

  '*The ACCC understands that the effect of ARTC's approach to revenue distribution is that producers originating in PZ3 pay only for the Direct Costs as they traverse the network in PZ1. The remainder of revenue received from PZ3 producers as they traverse PZ1 is instead allocated to reduce the capitalised losses in PZ3. As such, all of the remaining operating and capital*

[2] *ARTC, 2013-2022 Hunter Valley Corridor Capacity Strategy, p. 15.*

[3] *ibid. p. 27*

[4] *Ibid. p. 26*

costs of the rail network in PZ1 are incurred by producers originating in PZ1 and PZ2.[5]''; and

- Section 2.3 of the Discussion Paper where the ACCC states:

  '*The ACCC notes that absent the revenue distribution noted in section 2.2 above, ARTC would have over-recovered revenue in the constrained part of the network and would be required to refund this over-recovery to PZ1 and PZ2 producers, while the 'loss' to be capitalised in PZ3 would have been higher.*'

- The 2012 Compliance Determination where the ACCC states:

  'The annual compliance assessment under the HVAU provides for the ACCC to determine whether ARTC's calculations relevant to the reconciliation of access revenue are in accordance with the HVAU. In this regard, the ACCC notes that the HVAU does not specify how revenue is to be allocated to particular pricing zones or segments for the purposes of compliance with the revenue cap. However, the HVAU does include objectives such as:

  - *…*
  - *reaching an appropriate balance between the legitimate business interests of ARTC, the interest of the public, and the interests of applicants seeking access rights to the network, including providing access in a transparent, efficient and non-discriminatory manner (clause 1.2(d)); and*
  - *…*'

The inclusion of these statements by the ACCC would indicate that the ACCC may be seeking stakeholders' views in relation to the revenue allocation approach and whether it might result in equitable and non-discriminatory outcomes for PZ1 and PZ2 producers compared to PZ3 producers. Based on discussions with the ACCC it is evident that it is concerned about this, that is, is it appropriate that no revenue from PZ3 mines (above what is necessary to recover Direct Costs) is being allocated to contribute towards the costs of these recent investments made in PZ1.

ARTC will provide its consideration of these matters under review at section 5 to 9 of this submission.

3.2 Review Outcomes

At Section 1.2 of the Discussion Paper, the ACCC notes, separate to the review, two other upcoming related processes as follows:

1. The ACCC determination of whether ARTC has complied with the financial model and HVAU Pricing Principles for the 2013 calendar year (and subsequent years until the expiry of the current HVAU). Under the HVAU, ARTC is required

[5] '*This occurs while PZ3 is part of the 'unconstrained' network and therefore 'loss capitalisation' (rather than 'unders and overs' accounting) applies.*'

to submit its compliance documentation by 30 April each year but the HVAU does not specify a timeframe within which the ACCC must assess compliance.

2. The ACCC's assessment of any new replacement undertaking (the current HVAU expires in June 2016). The ACCC's assessment of any new undertaking is likely to commence around mid to late 2015.

The ACCC states that while this review is separate to these processes, information gathered from stakeholders during this review may inform both of the above processes.

ARTC has received indications from ACCC staff that any changes would not be made retrospectively and that it was not seeking to imply that ARTC is not compliant with the existing HVAU or during the remainder of the term of the existing HVAU. ARTC is now concerned that the ACCC may consider the outcome of this review in making its annual determination as to ARTC's compliance with the HVAU Pricing Principles for the 2013 calendar year, and subsequent calendar years ahead of expiry of the HVAU, and specifically whether ARTC has undertaken:

1. roll-forward of the RAB and RAB Floor Limit in accordance with the HVAU, including where Capital Expenditure has been endorsed by the RCG in accordance with section 9 of the HVAU, the ACCC will not consider whether that Capital Expenditure is Prudent[6]; and when required,

2. the calculations relevant to reconciliation of Access revenue with the applicable Ceiling Limit and calculation of any allocation of the total unders and overs amount in accordance with the HVAU.

In accordance with section 4.10(d) of the HVAU, ARTC is required to manage the closing RAB and unders and overs accounting in accordance with the ACCC's determination.

This would indicate to ARTC that, depending on the outcome of this review, that it is possible that the ACCC may seek to impose a different approach to revenue allocation or otherwise constrain the existing level of pricing flexibility currently and historically available under the HVAU and NSWRAU in making its annual compliance determinations under section 4.10 of the HVAU commencing in the 2013 calendar year. This would mean that for 2013, a different approach to revenue allocation could apply retrospectively to pricing and investment decisions made and ARTC and Access Holders in that year.

As pricing and investments have already to a large extent been finalised for the 2014 calendar year, and even beyond 2014, a different approach to revenue allocation may also apply respectively to those decisions.

ARTC considers that this creates an element of uncertainty for both ARTC and the industry at least during the period of this review and potentially into the future.

Even if , depending on the outcome of the review, the ACCC did not seek to impose a different approach to revenue allocation or otherwise constrain the existing level

[6] HVAU, section 4.10(d)

of pricing flexibility prior to expiry of the HVAU, the ACCC has raised the possibility that it may consider the outcomes of this review in its assessment of any new replacement undertaking.

ARTC considers that a lack of regulatory certainty increases immediate and longer term business and investment risks. ARTC understands, from consultation ahead of approval of the HVAU, that the industry seeks, through economic regulation, greater long term pricing and investment certainty.

3.3 Specific Comments in relation to matters raised in the Discussion Paper

ARTC has identified a number of matters raised by the ACCC in the Discussion Paper which it believes warrant a direct response in this submission to clarify and inform this review.

3.3.1 Process for 'allocating revenue'

At Section 2.2 of the Discussion Paper, the ACCC states:

'Based on confidential financial modelling provided by ARTC, the ACCC understands that ARTC implements the following process in allocating revenues it receives from Access Charges:

- *Firstly, ARTC charges producers based on the number of gross tonne kilometres (gtkm) used by each producer as they traverse each Segment which forms part of their journey. As indicated above, under the HVAU, the receipt of non-TOP revenue is based on the Direct Cost (variable component of costs) that the producer imposes on particular Segment(s). The receipt of TOP revenue is based on indirect or 'common costs' (fixed component of costs and new capital component of costs) that producers impose on particular Segment(s) within a particular pricing zone.*[7]

- *ARTC then allocates revenue to each Segment based on the Direct Cost and share of common costs imposed by producers on that Segment. Common costs are allocated in accordance with the cost allocation factors in section 4.6 of the HVAU. In particular, the common costs are allocated using either train kilometres or gtkm as the cost driver.*

- *However, in the case of revenue received by ARTC to cover the common costs of PZ3 producers as they traverse the Segments in PZ1, this revenue is distributed to the Segments in PZ3 even though the revenue was originally allocated to the PZ1 Segments.*

- *It is after this distribution that ARTC then conducts revenue reconciliation to determine whether there has been a revenue shortfall or surplus in PZ1 and PZ2 (the 'constrained' part of the network).*

[7] HVAU, Section 4.13.

The ACCC understands that the effect of ARTC's approach to revenue distribution is that producers originating in PZ3 pay only for the Direct Costs as they traverse the network in PZ1. The remainder of revenue received from PZ3 producers as they traverse PZ1 is instead allocated to reduce the capitalised losses in PZ3. As such, all of the remaining operating and capital costs of the rail network in PZ1 are incurred by producers originating in PZ1 and PZ2. This revenue distribution is illustrated in the diagram in Appendix A.'

ARTC would like to clarify a number of areas in relation to the application of the Ceiling Limit under the HVAU, in order to inform the ACCC's and stakeholders' understanding of the process, having regard to the pricing objectives prescribed at section 4.13 of the HVAU which are intended to:

a) Ensure, where possible, that pricing is such that revenue collected from an Access Holder for a Coal Train service has regard to the full cost of providing that service. The pricing objectives make no reference to cost recovery on a Pricing Zone or Segment basis, nor does the mere specification of Indicative Access Charges on a Pricing Zone basis imply this.

b) Provide for certainty and equity in the application of the TOP component of the Charges, as sought by stakeholders during finalisation of the HVAU.

The process that is applied is as follows:

1. Costs (not revenue) are either directly identified with Segments on the Network (primarily variable and fixed maintenance costs, and Depreciation and Return) or allocated to Segments on the Network in the basis of train kilometres or GTK in accordance with section 4.6 of the HVAU.

2. For each Segment, the Direct Cost (maintenance cost that varies with volume) is divided by all GTK carried by the Segment to determine a unit cost ($/000GTK).

3. Mines and relevant combinations of mines are then identified for testing of Access revenue against the relevant Ceiling Limit

4. Total Access revenue for the identified mine or combination of mines is determined.

5. For each identified mine or combination of mines the stand-alone Economic Cost of all Segments utilised by that mine or combination of mines is determined. The stand-alone Economic Cost for that mine or combination of mines consists of:

    a. Summed over all Segments utilised by that mine or combination of mines, the GTK for the mine or combination of mines carried on the Segment applied to the unit cost determined at (2) above. This results in the total variable cost (Direct Cost) associated with the Coal Train services for that mine or combination of mines.

    b. Summed over all Segments utilised by that mine or combination of mines, the fixed cost for the Segment including allocated overheads, and Depreciation and return either identified with or allocated to

those Segments determined at (1) above. This results in the total fixed cost associated with the Coal Train services for that mine or combination of mines.

6. For each mine or combination of mines, total Access revenue determined at (4) above is then tested against stand-alone Economic Cost determined at (5) above.

7. The tests carried out at (6) above serves to identify the combination of mines that is the Constrained Group of Mines, and the Constrained Network, where Access revenue for the Coal Trains serving the Constrained Group of Mines, and operated entirely within the Constrained Network, is:

    a. closest to if less than; or

    b. exceeds by the largest amount;

    the Economic Cost for the Constrained Network.[8]

    For the 2012 calendar year, the Constrained Network was represented by the coal lines between the Ulan mine and the ports at Newcastle.

8. Unders and overs accounting then seeks, in accordance with section 4.9 of the HVAU, to ensure that Access revenue for the Coal Trains serving the Constrained Group of Mines, and operated entirely within the Constrained Network recovers the stand-alone Economic Cost of the Constrained Network.

9. It is noted from (5) above that the stand-alone Economic Cost applicable to the combination of mines that is the Constrained Group of Mines (the Constrained Network) excludes Direct Cost associated with traffics that do not serve the Constrained Group of Mines and are operated entirely within the Constrained Network. Such traffics may include:

    a. Non-coal traffic that may utilise parts of the Constrained Network but also operate outside of the Constrained Network. In 2012, such traffics may include general freight and passenger trains operated from locations north and west of the Hunter Valley coal network to Newcastle and southern locations.

    b. Coal traffic serving mines that are not within the Constrained Network but may utilise parts of the Constrained Network and also operate outside of the Constrained Network. In 2012, such traffics may include Coal Trains serving the Gunnedah Basin, Gloucester Basin and mines south of Newcastle to Newcastle ports or power stations.

    c. Coal traffic serving mines that are within the Constrained Network and utilise parts of the Constrained Network but also operate outside of the Constrained Network. In 2012, such traffics may include Coal Trains serving the mines within the Constrained

[8] HVAU, Section 14.1, Definitions, 'Constrained Group of Mines', 'Constrained Network'.

Network to ports or power stations that are outside of the Constrained Network.

Because these traffics operate on parts of the rail network that are not constrained, Access revenue associated with these traffics does not recover the economic cost of the rail network utilised by these traffics. These traffics are referred to as unconstrained traffics.

10. Where at (8) above, Access revenue for the Coal Trains serving the Constrained Group of Mines, and operated entirely within the Constrained Network recovers the stand-alone Economic Cost of the Constrained Network, the result is that Access revenue from any unconstrained traffics utilising part of the Constrained Network is allocated to recover any costs associated with the Constrained Network that are not recovered at (8) above. As indicated at (9) above, this would include the Direct Cost associated with the operation of unconstrained traffics on the Constrained Network.

11. It then follows that any Access revenue associated with unconstrained traffics other than that allocated at (10) above is allocated to parts of the journey of the unconstrained traffics outside of the Constrained Network.

It is therefore clear that any allocation of revenue in relation to unconstrained traffics occurs as an **outcome** of the proper application of the combinatorial ceiling test, and identification of the Constrained Group of Mines and Constrained Network. The process understood by the ACCC as described at Section 2.2 of the Discussion Paper suggests that there is an allocation of revenue to parts of the network before application of the ceiling test. This is not the case.

For these reasons, ARTC also contends that the ACCC's characterisation that 'producers originating in PZ3 pay only for the Direct Costs as they traverse the network in PZ1' in the last paragraph of Section 2.2 of the Discussion Paper is not strictly correct. An Access Holder operating Coal Trains between mines in PZ3 and the port ultimately pays a certain amount to ARTC for that haul irrespective of the basis of pricing over that haul, and it is that amount that is tested against any applicable Revenue Limits under the HVAU. Any allocation of revenue is a consequence of the proper application of the combinatorial stand-alone ceiling test.

Consequently, the illustration of revenue distribution provided by the ACCC at Appendix A to the Discussion Paper is not, in ARTC's view, a proper representation of the application of the combinatorial stand-alone ceiling test. This is because:

- For the purpose of annual compliance assessment, revenue is not received by ARTC with respect to a particular Pricing Zone or Segment, as seems to be characterised in the illustration.

- Where the illustration is characterising full recovery of Economic Cost in PZ1, then the proper application of the stand-alone combinatorial ceiling test for the Constrained Network would only test Access revenue from the Constrained Group of Mines (in this case, PZ1 and PZ2 mines) against the stand-alone Economic Cost of the Constrained Network (in this case PZ1). At no point does the ceiling test for this combination of constrained mines (PZ1 and PZ2)

contemplate recovery of fixed cost for part of the Constrained Network (in this case PZ1) from revenue associated with unconstrained traffics (in this case PZ3 mines).

3.3.2 Context and scope of the review

In its consideration of the context and scope of the review set out at Section 1.1 of the Discussion Paper, the ACCC indicated that it understood that ARTC's revenue allocation practices have been historically practiced by ARTC under the NSWRAU, which was accepted by NSW Independent Pricing and Regulatory Tribunal (**IPART**) since the early 2000s. However, the ACCC noted that there have been a number of changes in the industry which may necessitate a revision in approach; outlined below:

'***1.1.2 Increase in coal volumes and investment***

Coal volumes have increased significantly since the early 2000s which means that capacity in PZ1 is now constrained, and PZ3 producer originating volumes are forecast to increase significantly in coming years. ARTC notes that while the heaviest coal volumes are currently at the lower end of the Hunter Valley (PZ1), the expected growth in coal mining is along the Gunnedah Basin which is producing high rates of growth in percentage terms.

The increase in coal volumes has necessitated investment in the network, in part to accommodate the expanding volumes in PZ3. In its 2013 Hunter Valley Corridor Capacity Strategy ARTC noted that 'coal demand on the (Gunnedah Basin) line has already increased significantly and is forecast to continue to increase very rapidly. Considerable increases in capacity continue to be needed to accommodate this growth'.

In the 2012 calendar year several major projects to create additional capacity in PZ1 were undertaken. These capital projects are likely to become more significant given that traffic traversing the network in PZ1 is forecast to increase significantly in coming years and significant investments in PZ1 are required to accommodate the increased traffic from PZ3 producers.

In this regard, ARTC has noted that congestion over the network remains a concern. ARTC has also stated that additional infrastructure is one option to mitigate congestion and enable the full capacity of network to be realised.

For new investments, the HVAU sets out a process by which the Rail Capacity Group (RCG) – a body comprised of industry representatives – can endorse capital projects proposed by ARTC. If a project is endorsed by the RCG then the ACCC must assume that the expenditure is prudent and can be included in the RAB (which in turn determines the Floor and Ceiling limits).'[9]

'***1.1.3 Loss capitalisation under the HVAU***

The ACCC understands that it was not anticipated that ARTC would recover economic cost in PZ3 during the time it was being regulated by IPART, and as such IPART

[9] Discussion Paper, p6.

considered it appropriate that revenue from PZ3 producers (aside from covering their Direct Costs in PZ1) would go towards minimising losses incurred by ARTC in PZ3. This was considered to be an efficient outcome which maximised utilisation of the network.

In contrast, however, under the HVAU loss capitalisation now applies in PZ3 which ensures that ARTC is able to recover its Economic Cost (and any capitalised losses) over the long term once volumes in PZ3 increase sufficiently. The loss capitalisation mechanism therefore minimises the risk of truncated returns to ARTC, as it is able to earn a return on the capitalised losses when they enter the PZ3 Regulated Asset Base (RAB). Loss capitalisation is discussed in more detail in section 2.3 of this discussion paper.'[10]

ARTC acknowledges that there have been a number of industry changes in the Hunter Valley over the last several years, including the two changes referenced by the ACCC in the Discussion Paper.

Indeed, the changes in the industry over this period was seen as the primary catalyst for a different approach to the commercial and operational practices applying in the Hunter Valley that were intended to be largely dealt with by the provisions of the HVAU. The HVAU provides for a number of new commercial processes including direct coal producer contracting, performance accountability and the development and delivery of Additional Capacity that were not addressed by the NSWRAU, but were sought by the ACCC and stakeholders during development of the HVAU.

Accordingly, a substantial part of the consultation and assessment undertaken centred on capturing the processes needed to address changes in the industry.

Above all, ARTC understood that the HVAU was intended to deliver greater certainty for both ARTC and Access Holders in long term planning and decision making in a changing industry environment.

With respect to the above changes referred to by the ACCC in the Discussion Paper, ARTC would have expected that both the ACCC and stakeholders would have been fully aware of the extent and profile of the growth in coal volumes anticipated in the Hunter Valley in the medium to long term. ARTC would have also expected that the ACCC and stakeholders would have been fully aware of the introduction of loss capitalisation under the HVAU and the nature of its application.

In section 5 of this submission, ARTC provides detail in relation to the approach taken to revenue allocation that was made available in ARTC's public documentation during the ACCC's assessment of the HVAU, and acknowledged in ACCC's relevant documentation. As a result, ARTC would have expected both the ACCC and stakeholders to be aware of the approach taken to revenue allocation in the Hunter Valley during the ACCC's assessment of the HVAU.

Given the above, ARTC considers that the information and opportunity to consider the question as to whether the above changes may necessitate a revision to the

[10] Ibid., p6.

approach to revenue allocation was available to both the ACCC and stakeholders during the ACCC's assessment of the HVAU.

Indeed, the ACCC raised questions in relation to the allocation of revenue in light of the application of loss capitalisation in its position paper on the HVAU of 21 December 2010 (**Position Paper**).

ARTC contends that the ACCC's assessment process of the HVAU is intended to represent the most appropriate and efficient formal opportunity to address various aspects of the HVAU, including the question as to whether the above changes may necessitate a revision to the approach to revenue allocation. Addressing such questions at that time, ahead of approval and commitment to the HVAU, would have provided greater certainty for ARTC and Access Holders during the term of the HVAU.

As it stands, given the opportunity provided it would not be unreasonable for ARTC, in light of the outcome of the ACCC's assessment of the HVAU, to confidently make future decisions on the basis that the existing approach to revenue allocation would be retained under the HVAU.

ARTC considers that providing what could be reasonably argued to be a 'second bite of the cherry' in this review, introduces considerable uncertainty in this area, which may impact on future incentives for all parties, and ARTC's appetite to continue to fund investment in capacity enabling projects.

3.3.3 Acceptance of the revenue allocation approach under the NSWRAU

At Section 1.1.3 of the Discussion Paper, the ACCC states:

'*The ACCC understands that it was not anticipated that ARTC would recover economic cost in PZ3 during the time it was being regulated by IPART, and as such IPART considered it appropriate that revenue from PZ3 producers (aside from covering their Direct Costs in PZ1) would go towards minimising losses incurred by ARTC in PZ3. This was considered to be an efficient outcome which maximised utilisation of the network.*'[11]

ARTC has been regularly engaging with IPART since the early 2000's in relation to the application of regulation and the NSWRAU in the Hunter Valley. Between 2004-05 and 2010-11 (6 years), ARTC submitted compliance submissions to IPART for stakeholder consultation and approval. Over this period, ARTC has no recollection of IPART, verbally or in any regulatory documentation, putting forward the above view.

Indeed it is difficult to see how IPART could have expressed such a view in light of the fact that, under the NSWRAU:

1. there were no Pricing Zones between which revenue could be allocated; and

2. access pricing was undertaken on an origin-destination haul basis (per tonne) as discussed further below.

[11] Ibid., p6.

With origin-destination haul based pricing, revenue is not identified with a particular part of the network.

ARTC also notes that IPART explicitly sought to address the issue of, where the application of the combinatorial ceiling test prevented the track owner from averaging returns between constrained and unconstrained parts of the network, losses being incurred on unconstrained parts of the network by 'allowing an unders an overs account system and permitting a maximum rate of return above the mid-point determined by the CAPM framework.'[12]

ARTC submits that this would have been a more likely basis for addressing losses incurred by the track owner, and that it would be unlikely that IPART would have additionally considered allocation of revenue to unconstrained parts of the network to further compensate or reduce such losses at the time.

3.3.4 Allocation of Access revenue to Pricing Zones or Segments

At Section 2.1 of the Discussion Paper, the ACCC states:

'*Importantly, section 4 of the HVAU only relates to the total amount of revenue that is recoverable by ARTC through Access Charges. The HVAU does not specify how revenue from the charges is to be allocated to particular Pricing Zones or Segments for the purposes of compliance with the combinatorial matrix in sections 4.2 and 4.3 of the HVAU.*'

This statement is correct. As indicated at section 4 of this submission, the Ceiling Limit (test) prescribed at section 4.3(a) of the HVAU, and under the NSWRAU, is a traffic based test, not a Segment based test. As such, in order to carry out the test for annual compliance purposes it is not necessary to identify revenue collected from an Access Holder within particular Pricing Zones or Segments on the Network. This is irrespective of any approach that may be taken to prescribe access pricing under the HVAU.

As indicated at section 4.2 of this submission, the approach to access pricing under the HVAU (GTK based, 2-part pricing for Pricing Zones) was introduced for reasons of increased transparency and to provide incentives for promoting efficiency as sought by the ACCC and stakeholders during finalisation of the HVAU.

The specification of a different access price for Pricing Zones under the HVAU may result in a perception that certain revenues collected may be applied to a Pricing Zone. However, for the purpose of compliance with the combinatorial matrix inherent in the Floor and Ceiling Limits, revenue resulting from the application of GTK in each Pricing Zone to the price in each Pricing Zone is accumulated over the journey for each traffic (mine) to result in an amount of revenue for that journey (mine) which is tested for compliance.

The introduction of a new approach to specifying pricing under the HVAU was not expected to have any impact on compliance obligations and the application of the floor/ceiling tests carried over by ARTC from the NSWRAU to the HVAU.

[12] IPART, Aspects of the NSW Rail Access Regime Final Report, 28 April 1999, p74.

4 RELEVANT REGULATORY DEVELOPMENT

It is important to provide context to the current approach under the HVAU, which has largely preserved the fundamental floor and ceiling test methodology that has been a feature of the regime since the late 1990s. This includes examining the rationale for the current approach and how pricing and revenue allocation has evolved through time, complementing the growth and development of the Hunter Valley coal network.

Since around 2000, the regulatory principles governing prices and revenue for access to the Hunter Valley coal network are prescribed under the NSWRAU and HVAU applicable as described below.

4.1 NSWRAU

In September 2004, ARTC commenced a 60 year lease of substantial parts of the rail network in NSW including parts of the interstate rail network, the Hunter Valley coal network and some other regional lines. As at commencement, ARTC's lease extended to include the Hunter Valley coal network from Islington Junction in Newcastle to the Ulan mine in the west and Gap, near Werris Creek in the north. Initially ARTC's lease did not include the rail network north of Gap to the Gunnedah Basin mines, or that part of the RailCorp network south of Islington Junction to mines and coal fires power stations south of Newcastle.

On 1 July 2011, ARTC extended the lease to include parts of the rail network north of Gap to Boggabilla, including the network to existing Gunnedah Basin coal mines as far north as Narrabri.

ARTC's lease provided for those parts of the leased network to be covered by the existing NSWRAU until such time as an undertaking submitted by ARTC was approved by the ACCC to cover any part of the leased network.

As such, the Hunter Valley coal network has been regulated in accordance with the NSWRAU, administered by IPART from lease commencement until 1 July 2011 (to Gap).

The ACCC has recently accepted a variation to the HVAU that provides for coverage of Segments between Gap and Turrawan and, as such, this part of the Hunter Valley coal network ceased to be covered by the NSWRAU from 1 January 2014.

Prior to lease commencement, the Hunter Valley coal network was covered by the NSW Rail Access Regime from around 2000, also administered by IPART. In ARTC's view, there is no substantive difference in the application of the NSWRAU and NSW Rail Access Regime that is material to this review.

It should be noted though that earlier versions of the NSW Rail Access Regime (circa 1999) incorporated provisions specific to the application of this instrument to coal traffic, primarily aimed at eliminating over time the monopoly rents that

were identified with early coal pricing for some central Hunter Valley coal mines. In the earlier versions there was also a requirement that pricing in relation to coal should be on an origin-destination specific haul basis, irrespective of the Access Seeker and irrespective of the route of the haul[13].

4.1.1 Revenue Limits under the NSWRAU/NSW Rail Access Regime

The part of the NSWRAU that is particularly relevant to this review is the pricing principles prescribed at Schedule 3. Of particular relevance is Clause 1 prescribing floor and ceiling test of revenue below.

'1 PRICING PRINCIPLES

Prices will be negotiated so that the following requirements are satisfied:

(a) Access revenue from every Access Seeker must at least meet the Direct Cost imposed by that Access Seeker. In addition, for any Sector or group of Sectors, revenue from Access Seekers together with Line Sector CSOs (if applicable) should, as an objective, meet the Full Incremental Costs of those Sectors ("floor test").

(b) For any Access Seeker, or group of Access Seekers, Access revenue must not exceed the Full Economic Costs of the Sectors which are required on a stand alone basis for the Access Seeker or group of Access Seekers ("ceiling test").

(c) The Rail Infrastructure Owner's total Access revenues together with Line Sector CSOs (if applicable) must not exceed the stand alone Full Economic Costs of that part of the NSW Rail Network for which it is the Rail Infrastructure Owner.'[14]

Applicable definitions prescribed at Clause 1.1 Definitions of Schedule 3 and Schedule 7 Definitions of the NSWRAU are provided at **Appendix 1**.

Other than the requirement to satisfy the ceiling and floor test with respect to access revenue, the NSWRAU does not prescribe any further limits on access pricing that can be charged by the track owner[15].

In accordance with the NSWRAU, the relevant track owner (including ARTC) is required to provide documents to IPART demonstrating compliance with the NSWRAU each financial year. Specifically, the track owner is required to demonstrate that Access revenue meets the floor and ceiling tests described above.

The application of these tests is explained in more detail below.

The floor test

The floor test is a 'traffic' based test where Access revenue for each traffic operated by an Access Seeker over the traffic's journey must at least meet the Direct Cost associated with that traffic's journey over all of the Sectors on the Hunter Valley coal network that form part of that traffic's journey.

[13] NSW Rail Access Regime (Circa 1999).

[14] Clause 1 of Schedule 3 of the NSWRAU.

[15] Noted above that origin-destination based coal pricing was required under earlier versions of the NSW Rail Access Regime (circa 2000).

For the purpose of the floor test, 'traffic' could be considered to be the movement of a freight commodity or passengers from an origin location (station, silo or mine) to a destination (station, terminal or port) and return.

Under the NSWRAU, the accepted practical application of the floor test is a demonstration that Access revenue for each traffic at least meets the variable maintenance cost attributable to that traffic over all Hunter Valley coal network Sectors for the traffic's journey. A unit (per GTK) variable maintenance cost for each Sector is applied to the traffic's GTKs for the Sector.

The ceiling test

The ceiling test is also a 'traffic' based test where Access revenue for each traffic operated by an Access Seeker over the traffic's journey must be no more than the Full Economic Cost of all Hunter Valley coal network Sectors required for that traffic's journey on a stand-alone basis (as if that traffics operated solely by itself). In addition the ceiling test is combinatorial in nature where Access revenue for each and every combination of traffics must be no more than the Full Economic Cost of all Hunter Valley coal network Sectors required for that traffic's journey on a stand-alone basis (as if that combination of traffics operated solely by itself).

It is conceivable that for a network with multiple origins (mines) and destinations (terminals), such as the Hunter Valley coal network, there would be a myriad of combinations of coal traffics that would need to be subject to the ceiling test.

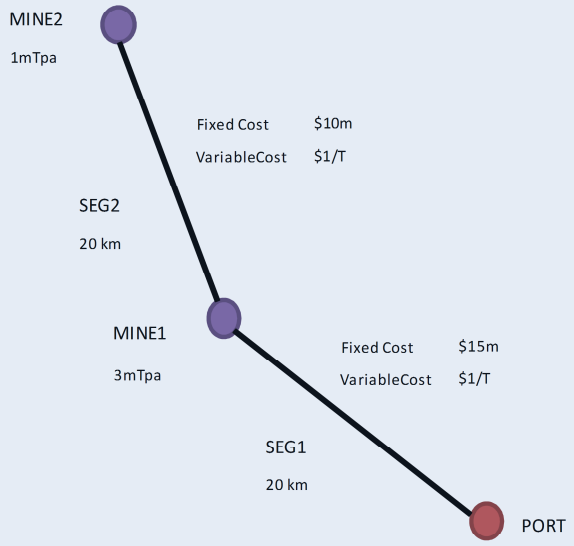
In order to further illustrate the application of the floor and ceiling tests, the following two case studies are provided.

Case Study 1 provides an illustration of the application of the tests for a small network of 2 mines and a port, where both mines are constrained.

Case Study 2 provides an illustration of the application of the tests for a small network of 2 mines and a port, where 1 mine is constrained and 1 mine is unconstrained.

CASE STUDY 1 - small network of 2 mines and a port, where both mines are constrained.

Illustration of NSWRAU Floor and Ceiling Test Application – Constrained Network



FLOOR/STAND-ALONE CEILING LIMITS

COMBINATION	MINES	FLOOR	SAC CEILING
1	MINE1	$3m	$18m
2	MINE2	$2m	$27m
3	MINE1 + MINE2	$5m	$30m

PRICING APPROACH

Pricing will generate revenue from each of MINE1 and MINE2 irrespective of price structure. For simplicity choose a NT based structure.

PRICING OPTIONS

The floor/stand-alone ceiling tests have been carried out for 4 different pricing options that may reflect certain pricing objectives.

PRICING OPTION	MINES	PRICE ($/NT)
1	1 2	6 12
2	1 2	4.75 15.75
3	1 2	3.5 19.5
4	1 2	1 27

FLOOR/STAND-ALONE CEILING TESTS

PRICING OPTION	MINES	REVENUE RECOVERY ($m)	PRICE ($/NT)	FLOOR ($m)	CEILING ($m)	MINE2 REVENUE ALLOCATION TO SEG1 FIXED COST ($m)	CONTRIBUTION TO RECOVERY OF SEG1 FIXED COST (%)
1	1 2 1+2	18 12 30	6 12	3 2 5	18 27 30	0	100 0
2	1 2 1+2	14.25 15.75 30	4.75 15.75	3 2 5	18 27 30	3.75	75 25
3	1 2 1+2	10.5 19.5 30	3.5 19.5	3 2 5	18 27 30	7.5	50 50
4	1 2 1+2	3 27 30	1 27	3 2 5	18 27 30	15	0 100

In the above illustration, under all Pricing Options, revenue for each mine (and combination of mines) satisfies the respective floor and ceiling tests. As such, under all pricing options, there is no monopoly rent being collected and there is no cross-subsidy between mines or combinations of mines. This demonstrates the ability of the floor/ceiling test approach to provide for some pricing flexibility in order to pursue other objectives such as promoting competition or creating efficiency incentives through pricing whilst still satisfying regulatory constraints.

That is, where the network is constrained, the owner is indifferent to revenue recovery of individual mines and so can be flexible in pricing to promote efficiency through pricing structure, level and differentiation. All Pricing Options result in the MINE1/2 combination being constrained. Pursuit of a pricing objective that aligns pricing to distance in order to facilitate equitable competition between mines (Pricing Option 1) results in recovery of all SEG1 fixed cost from MINE1. Requiring recovery of a higher share of SEG1 fixed cost from MINE2 (Pricing Options 2, 3 and 4) will in this instance result in pricing that is not aligned to distance (and ability to pursue this pricing objective), where revenue and pricing for MINE2 must increase and, in order to satisfy the combined MINE1/2 ceiling test, revenue and pricing for MINE 1 must fall.

Additionally, the application of the combinatorial ceiling test, prevents pricing and revenue from MINE1 increasing beyond that shown in Pricing Option 1 (as the test for the individual MINE1 would not be satisfied), which would reduce pricing and revenue from MINE2 (in order to satisfy the combined MINE1/2 ceiling test) and result in MINE1 contributing to SEG2 fixed cost (which is not used by MINE1).

Relative contribution to fixed cost around the network is an outcome and is important for ceiling test compliance rather than for individual customers that are more concerned with pricing incentives.

As noted previously the ceiling test is a traffic based test rather than a segment based test. The segments used by the group of constrained mines (MINE1 and MINE2) forming the constrained network in the illustration may form part of a larger network.

On this larger network other traffics may flow where such traffics may utilise parts of the above constrained network and originate and/or terminate beyond the constrained network. Such traffics may include flows from other coal mines beyond MINE1 and MINE2 or other commodities.

Where the network in the illustration is constrained, revenue from MINE1 and MINE2 combined recover the stand-alone ceiling (Full Economic Cost) of that constrained network. The implication is that revenue from MINE1 and MINE2, which operate entirely within that constrained network, recovers all Direct Cost associated with their utilisation of that network, as well as all fixed costs of that network on a stand-alone basis. Fixed costs are the difference between Full Economic Cost for the above constrained network and Direct Cost of utilisation of that constrained network by the constrained mines (MINE1 and MINE2).

This would imply that other traffics that utilise part or all of the above constrained network but also operate outside of that network must only recover Direct Cost associated with their utilisation of that network (in order to satisfy the relevant floor test for those traffics). Any revenue from those traffics in excess of that required to meet the floor test on the constrained network must be used to recover at least the Direct Cost associated with their utilisation of those parts of the network that are outside of the above constrained network. Any remaining excess revenue is then used to recover a contribution towards the fixed cost of those other parts of the network up to ceiling for those relevant parts of the network.

If revenue from these other traffics is insufficient to recover the fixed cost of the other parts of the network utilised by those traffics outside of the above constrained network (alone or in combination) then these other parts of the network are unconstrained.

Where revenue from these other traffics becomes sufficient to recover the fixed cost of these unconstrained parts of the network utilised by those traffics (alone or in combination) then these unconstrained parts of the network become constrained. When this occurs, these other traffics join MINE1 and MINE2 as being constrained and the larger network used by MINE1 and MINE2 in combination with these other now constrained traffics becomes the constrained network.

In any event, revenue for any combination of traffics described above does not fall outside the floor and stand-alone ceiling limits.

When this larger network becomes constrained, any further revenue from the other traffics can only be extracted without breaching the stand-alone ceiling limit for the larger network, if revenue collected from MINE1 and MINE2 is reduced so that that combined level of revenue (MINE1, MINE2 and the other traffics in combination) remains the same.

CASE STUDY 2 - small network of 2 mines and a port, where 1 mine is constrained and 1 mine is unconstrained.

Illustration of NSWRAU Floor and Ceiling Test Application - Constrained/Unconstrained Network

FLOOR/STAND-ALONE CEILING LIMITS

Will vary depending on Volume Option below. Refer Floor/Stand Alone Ceiling Tests below.

PRICING APPROACH

Pricing will generate revenue from each of MINE1 and MINE2 irrespective of price structure. For simplicity choose a NT based structure. Maintain distance based pricing.

VOLUME OPTIONS

The floor/stand-alone ceiling tests have been carried out for 4 different volume options for MINE2, reflecting development of MINE2 over time.

VOLUME OPTION	MINE2 VOLUME (mNT)
1	0.5
2	1.0
3	1.5
4	2.0
5	2.5
6	3.0

FLOOR/STAND-ALONE CEILING TESTS

VOLUME OPTION	MINES	REVENUE RECOVERY ($m)	PRICE ($/NT) DISTANCE BASED	FLOOR ($m)	CEILING ($m)	MINE2 REVENUE ALLOCATION TO SEG1 FIXED COST ($m)	MINE2 CONTRIBUTION TO RECOVERY OF SEG1 FIXED COST (%)	MINE2 CONTRIBUTION TO RECOVERY OF SEG2 FIXED COST (%)
1(0.5)	1 2 1+2	18 9 27	6 18	3 1.5 4.5	18 36.5 39.5	0	100 0	37.5
2(1.0)	1 2 1+2	18 18 36	6 18	3 3 6	18 38 41	0	100 0	75
3(1.5)	1 2 1+2	17.0 25.5 42.5	5.7 17	3 4.5 7.5	18 39.5 42.5	1.0	93 7	100
4(2.0)	1 2 1+2	14.6 29.4 44	4.9 14.7	3 6 9	18 41 44	3.4	77 23	100
5(2.5)	1 2 1+2	13.0 32.5 45.5	4.3 13	3 7.5 10.5	18 42.5 45.5	5.0	66 33	100
6(3.0)	1 2 1+2	11.8 35.2 47	3.9 11.7	3 9 12	18 44 47	6.2	59 41	100

This illustration is similar to the larger network described in Case Study 1 above containing both constrained and unconstrained parts. This illustration is also representative of the historical and future development of the Hunter Valley coal network or, for that matter, the development of many other minerals regions. Such developments normally consist of a number of well-established and relatively stable group of mines closer to a port (constrained) but where, at a point where volumes from these mines becomes more stable, further volume growth is sourced from newer and more marginal operations further away from the port (unconstrained).

In the illustration, increasing revenue from the currently unconstrained MINE2 is achieved through increasing volumes whilst retaining distance based pricing. This better reflects the pattern of volume growth described above and present on the Hunter Valley coal network.

In the illustration, under all Volume Options, revenue for each mine (and combination of mines) satisfies the respective floor and ceiling tests. As such, under all pricing options, there is no monopoly rent being collected and there is no cross-subsidy between mines or combinations of mines. Under all Volume Options, the objective of distance based pricing has been observed.

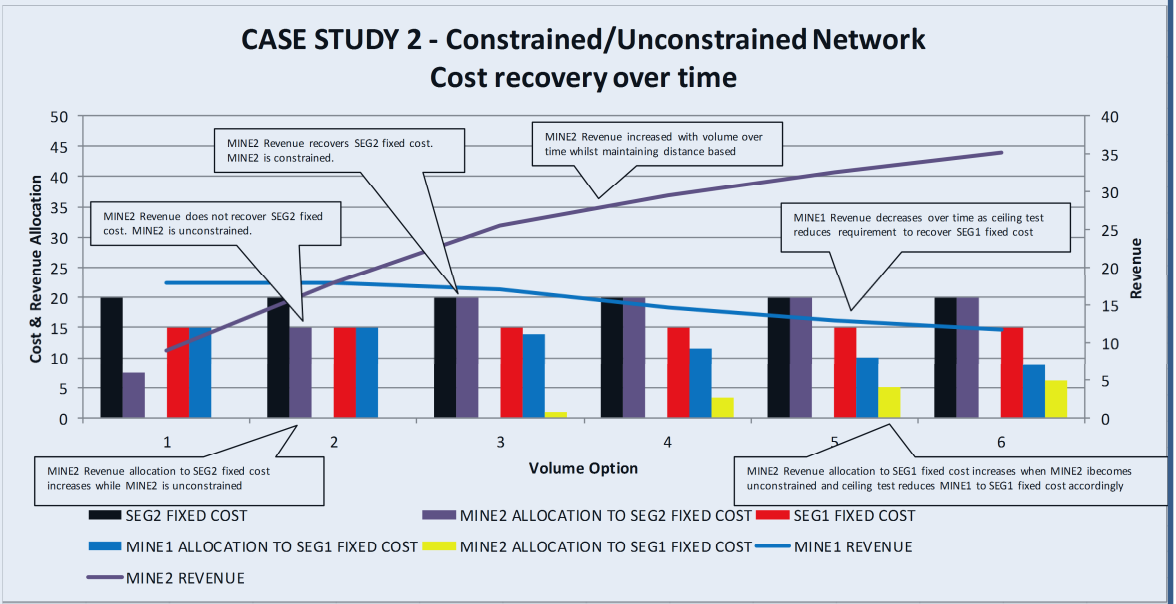
In the illustration, under Volume Options 1 and 2 (green highlight), MINE1 is constrained and MINE2 recovers 50% (Option 1) and 75% (Option 2) of SEG2 fixed cost. Under these Options MINE2 is yet to become constrained. Recovery of SEG1/2 fixed cost from MINE1/2 combination is 22.5/35 = 64% (Option 1) and 30/35 = 86% (Option 2). Where the network is unconstrained, Volume Options 1 and 2 result in revenue for all combinations that satisfies respective floor and ceiling tests and maximises revenue recovery (or minimises under-recovery) from

the network as a whole. Under these Volume Options, the MINE2 price is capped by the market (unconstrained) and MINE1 is constrained by regulation (ceiling test).

Under Volume Option 3 (red highlight), the increased MINE2 volume of 1.5mT results in MINE2 revenue that more than fully recovers SEG2 fixed cost. Recovery of SEG1/2 fixed cost from the MINE1/2 combination is now over 100% and the MINE1/2 combination is now constrained. To satisfy the ceiling test for the MINE/2 combination, pricing must reduce whilst still observing the distance based pricing objective. MINE2 commences making a contribution to SEG1 fixed cost and MINE1's contribution to SEG1 fixed cost starts to reduce.

Under Volume Options 4, 5 and 6 (blue highlight), further increases in MINE2 volume (to 2.0mNT, 2.5mNT and 3mNT) and revenue results in combined MINE1/2 revenue that further exceeds the ceiling limit for this combination. Pricing for both MINE1 and MINE2 has been further reduced (whilst still observing the objective of distance based pricing) in order to satisfy the ceiling test for the MINE1/2 combination. MINE2 makes increasing contributions to SEG1 fixed cost as its volume grows and MINE1's contribution to SEG1 fixed cost continues to reduce accordingly.

The graph below illustrates the changing pattern of each mines contribution to cost recovery of parts of the network as volumes change over time.



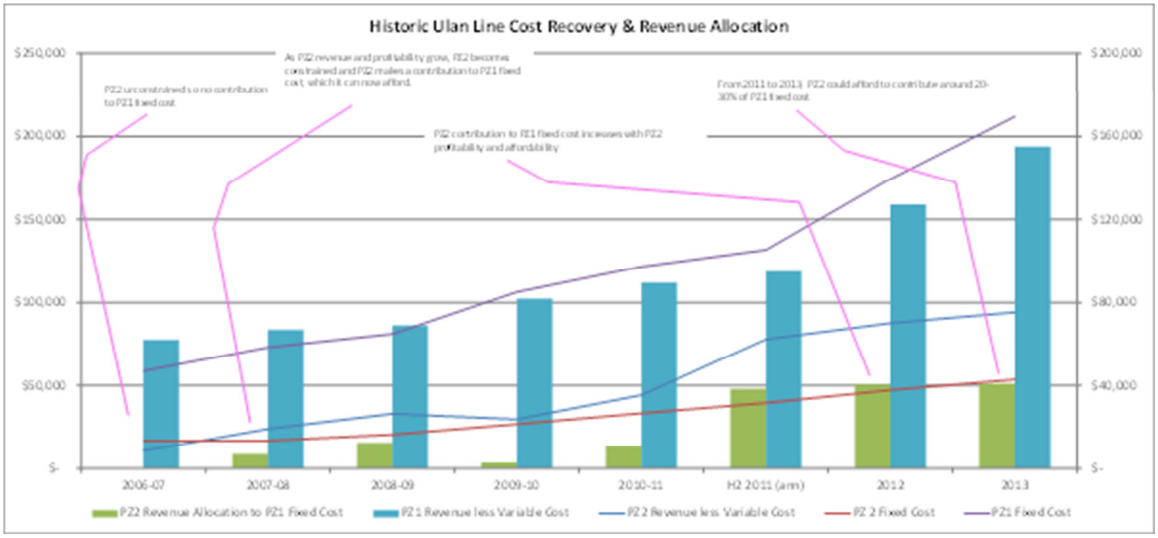
The case studies above are intended to illustrate how the floor and ceiling tests incorporated in the NSWRAU (and HVAU) operate in both constrained and unconstrained networks and how the resulting revenue allocations are applied across parts of the network over time as the pattern of volumes changes.

In order to provide some actual context, **Figure 4** below shows how the floor and ceiling tests under the NSWRAU and HVAU have applied historically to allocate revenue and recover cost in PZ1 and PZ2 over the period 2006-07 to 2012 during the development of the Ulan Line at that time. In 2006-07 (and earlier years) there

were insufficient volumes on the Ulan Lined revenue to recover fixed cost of the Ulan Line and as such the Ulan Line made no contribution to fixed cost and investment in PZ1. From 2007-08, as Ulan Line volumes increased the Ulan Line mines became constrained and the floor and ceiling tests operated to allocate revenue to PZ1 and make increasing contributions to the recovery of PZ1 fixed cost.

ARTC is of the view that the present stage of development of the Gunnedah Basin mines could be considered to be similar to the Ulan Line mines at around 2006-07.

Figure 4



Under the NSWRAU, the accepted practical application of the ceiling test is a demonstration that Access revenue for a number of material combinations of traffics is no more than the Full Economic Cost of all Hunter Valley coal network Sectors required for that combination of traffics. Generally, documentation provided to IPART tests a number of individual traffics and combinations of traffics (usually up to around 30-40 combinations) where the focus is around those combinations where revenue is close to or exceeds the applicable Full Economic Cost, being combinations that may become the constrained combination.

This practical application of the ceiling test has resulted from experience under the NSWRAU (and subsequently the HVAU) that indicates that there are:

- a large number of mine combinations that could be tested under the ceiling test where almost all of which will result in a determination of Economic Cost that is well in excess of relevant Access revenue for that combination;

- a few combinations which will result in a determination of Economic Cost that is closer to relevant Access revenue for that combination, and

- one combination that results in a determination of Economic Cost that is closest to or is less than relevant Access revenue for that combination by the greatest amount (the Constrained Group of Mines).

4.1.2 Earlier Coal Pricing under the NSWRAU/NSW Rail Access Regime

Other than the requirement to satisfy the ceiling and floor test with respect to access revenue, the NSWRAU does not prescribe any further limits on access pricing that can be charged by the track owner[16].

Due to the combinatorial nature of the ceiling test, there are a myriad of different prices that can be charged that will satisfy the test. As such the NSWRAU affords the track owner with some flexibility in relation to the determination of access charges. Such flexibility enables the track owner to pursue outcomes in relation to pricing of access to coal. Such outcomes could include:

- the maximisation of access revenue for the Hunter Valley coal network as a whole (given that some parts of the network are constrained and others aren't);
- the use of pricing incentives to assist in bringing about more efficient use of network capacity and coal chain capacity;
- the encouragement of new mines and entrant to the network; and/or
- the facilitation of effective competition between mines and coal networks.

It is arguable that the pursuit of such objectives or a combination of such objectives is appropriate.

The structure of pricing for Hunter Valley coal under the NSWRAU was traditionally per tonne based. This was particularly the case in the early 2000's and prior to the commencement of ARTC's lease, and emanated from the explicit provision of origin-destination based pricing incorporated in earlier versions of the NSW Rail Access Regime (circa 1999)[17]. That is, for each mine loading point, there was a single $/tonne access charge to the port to reflect both the loaded journey to the port and return empty journey back to the mine. There was some differentiation in pricing between export and domestic coal, and there was some tapering of access pricing for longer distance hauls.

Under the NSWRAU, there is no requirement to publish access pricing. Nevertheless, ARTC contends that the above characteristics of access pricing under the NSWRAU was well known by both rail operators and producers over a number of years.

A well-recognised[18] shortfall of the single per tonne approach to access pricing for each load point or mine historically practised under the NSW Rail Access Regime was that the cost of access to the network from any mine was the same

[16] Noted earlier that origin-destination based coal pricing was required under earlier versions of the NSW Rail Access Regime (circa 2000)

[17] The explicit provision of origin-destination based pricing was removed from the NSW Rail Access Regime in the early 2000's, along with provisions specific to the application of this instrument to coal traffic, primarily aimed at eliminating over time the monopoly rents that were identified with early coal pricing for some central Hunter Valley coal mines

[18] NSW Minerals Council Submission to the NCC, 22 May 1998 (p38). "[coal companies] reject the continuation of single part pricing where this would inhibit the adoption of cost-reflective pricing, and where it would discourage more efficient rail operations and pricing.

irrespective of the configuration of the coal train used. Where capacity of the Hunter Valley coal network is not constrained such an approach may be acceptable, but as capacity becomes constrained, the need to recognise the imposts that different train configurations may have on the capacity of the network and the coal chain generally becomes more important. Such recognition will result in more efficient use of existing capacity as well as more efficient investment decisions in relation to new capacity.

4.1.3 ARTC coal pricing under the NSWRAU/NSW Rail Access Regime

Following commencement of ARTC's lease in 2004, ARTC's commercial practices in relation to the Hunter Valley coal network were largely governed by contractual arrangements carried over from the previous track owner with rail operators. As a result, access pricing for coal services remained on a per tonne basis and were not published.

4.2 HVAU

ARTC's HVAU was approved by the ACCC and became effective from 1 July 2011. The HVAU covers the Hunter Valley coal network from Islington Junction (coal lines), Newcastle ports through to Ulan and Gap. Following the extension of its lease in NSW to include Gap to Boggabilla, ARTC sought to vary the HVAU to extend coverage to Turrawan near the Narrabri coal mine. The ACCC has recently approved this variation and coverage of this part of the Hunter Valley coal network has become effective from 1 July 2014.

The approval of the HVAU followed a period of extensive stakeholder consultation conducted by the ACCC from the time of ARTC's initial application in April 2009 (over two years), which followed a period of further stakeholder consultation carried out by ARTC from around mid-2008. This earlier consultation including broader industry wide presentations as well as separate detailed consultation with key producer stakeholders and the coal industry representative body (Hunter Rail Access Task Force, a sub-group of the NSW Minerals Council specifically tasked to represent Hunter Valley coal producer members in regulatory development and consultation (**HRATF**)).

The HRATF carried out a similar role in relation to regulatory development and consultation during the development of NSW Rail Access Regime and NSWRAU during the late 1990's, as well as in relation to compliance activities undertaken with respect to those instruments since then.

During its own stakeholder consultation in 2008, as well as during the ACCC stakeholder consultation from 2009, ARTC made it clear in presentations and documents that it was not seeking to move substantively from the pricing principles prescribed under the NSWRAU, and specifically the floor and ceiling tests and basis for determining revenue limits. This was done so as to provide some continuity and consistency in relation to these aspects. ARTC was not aware of any substantial concerns being raised by stakeholders with this approach.

However, ARTC recognised concerns that had been expressed by stakeholders, particularly coal producers, in relation to the shortfalls of the origin-destination

based pricing approach that had been employed under the NSW Rail Access Regime and NSWRAU (as described above) and in particular the lack of appropriate incentives in relation to the performance of both the track owner and access seekers inherent in that approach.

To this end, and without seeking to substantively alter the current revenue limits and floor/ceiling tests, ARTC sought to propose to stakeholders (in 2008) and, following consultation with stakeholders, the ACCC in 2009, a number of additional features and refinements to the pricing principles that sought to address stakeholder and ARTC concerns with the existing pricing approach. Some of these proposals were originally sought by stakeholders, and primarily sought to deliver a pricing approach that incorporated meaningful incentives for efficient utilisation of resources, including Coal Chain Capacity, for investment in Additional Capacity, and for performance. The key additional features and refinements included:

- **Loss Capitalisation** – A mechanism that enabled ARTC to capitalise economic losses arising during early life cycle of a network, where volumes were insufficient to recover full economic cost enabling recovery in the longer term where the market permitted volume grow to sufficient levels to support such recovery. This mechanism was intended to provide incentives for investment in more marginal parts of the Hunter Valley coal network ahead of demand. The approved HVAU limited application of this mechanism to Muswellbrook – Gap.

- **Differential Rates of Return** – Different rates of return were proposed for the constrained central and western Hunter Valley coal network, and the more marginal parts of the network north of Muswellbrook used by the Gunnedah Basin mines. This mechanism was intended to provide incentives for investment in more marginal parts of the Hunter Valley coal network. The approved HVAU incorporated a single rate of return for the Hunter Valley coal network, argued to reflect some average between constrained and marginal parts of the network.

- **Incentive Pricing –** To address long held industry concerns with historical origin-destination per tonne based pricing and to provide a basis for incentives for more efficient utilisation of resources, 2-part pricing (variable/take-or–pay (**TOP**) components) expressed in terms of GTK was proposed together with pricing objectives linking pricing components to recovery of cost where possible, and a commitment to introduce pricing incentives for more efficient utilisation of resources during the term of the HVAU through the definition of the indicative service and price differentiation or different coal train configurations. The approved HVAU incorporated 2-part pricing initially without any incentives (Interim Access Charges) but with an explicit graduated process to deliver the required incentives (Initial Access Charges and Final Access Charges).

- **Published Pricing –** To improve pricing transparency, the publishing of all coal pricing and other information was proposed and accepted as part of the approved HVAU.

- **Pricing Zones –** In order to simplify a range of aspects of the HVAU (including pricing, performance accountability and reporting, investment endorsement,

and compliance assessment), 3 Pricing Zones to identify separate parts of the Hunter Valley coal network from a geographical and, more importantly, commercial perspective were proposed. Primarily, the 3 Pricing Zones were intended to separate those parts of the Hunter Valley coal network with different commercial characteristics where Pricing Zones 1 and 2 were constrained and PZ3 was unconstrained. The Pricing Zones are incorporated in the approved HVAU.

- **Cost Definition and Allocation –** To support the objectives of the HVAU in relation to the transparency and detail of methodologies, principles and processes for determining Access revenue limits (floor/ceiling), greater prescription around the definition of costs, including the efficiency of costs and the allocation of non-Segment Specific Costs was proposed, and accepted in the approved HVAU.

- **Development and Endorsement of Additional Capacity** – To replace the existing less structured process for the development of, and consultation on, capital expenditure proposals a formal, comprehensive mechanism covering the identification, development, consultation, delivery and funding of Additional Capacity (Hunter Valley corridor capacity strategy, Rail Capacity Group) was proposed. Following consultation, the initially proposed process was substantially strengthened and widened prior to approval of the HVAU.

- **TOP Rebates** – To increase ARTC's accountability for performance against contractual obligations a mechanism to identify shortfalls (system-wide true up test) in performance and application of penalties via a rebate of TOP charges was proposed. Following consultation, the initially proposed mechanism was substantially strengthened prior to approval of the HVAU

The ceiling and floor test under the NSWRAU, as described above, has substantively been retained under the HVAU, albeit that its application is conditional upon recovery of prior economic losses on those parts of the Hunter Valley coal network north of Muswellbrook. It should be noted though that under the NSWRAU, it was generally accepted that that part of the Hunter Valley coal network was unlikely to be constrained and as such, compliance assessment under the NSWRAU was also not applicable[19].

4.2.1 ARTC Coal Pricing under the HVAU

Since July 2011, ARTC coal access pricing has been developed either through specific processes prescribed under the HVAU (e.g. development of the Initial Indicative Service and Initial Indicative Access Charge in 2012) or through the annual process of price development and negotiation prescribed at Section 4.20 and 4.15 of the HVAU.

Once coal access prices are finalised for a calendar year, they are published (Indicative Access Charges and Charges for non-Indicative Services) on ARTC's website.

[19] NSWRAU, Schedule 3, Clause 5(f).

Coal access pricing is 2-part and prescribed for different service configurations in each Pricing Zone. All pricing is expressed on a GTK basis.

Initially, the nature of pricing (Interim Indicative Access Charges) was such that pricing was not differentiated in terms of the cost of consumption of resources and so provided no incentive to use resources more efficiently. This was done on an interim basis so as not to impose price shocks on industry with the introduction of the HVAU, where a graduated introduction of price differentiation was explicitly provided under the HVAU.

From late 2012, differentiated coal access pricing was introduced under the Initial Indicative Service development.

Published 2-part differentiated coal access pricing has applied in relation to the 2013 and 2014 calendar years.

It is anticipated that from 2015, further refinement of the differentiated coal access pricing will be introduced as provided under the Final Indicative Service development at Section 4.18 of the HVAU and currently before the ACCC.

ARTC considers that the current approach to coal access pricing under the HVAU is a substantial improvement on the approach that applied on the Hunter Valley coal network throughout the late 1990's and 2000's. Changes to the coal access pricing approach under the HVAU have led to much greater transparency and efficiency in pricing in relation to:

- the determination of revenue limits;
- the transparency through publishing of pricing for all Coal Train configurations;
- information provision to Access Holders in relation to the annual development of coal access pricing; and
- pricing differentiation to incentivise more efficient consumption of resources, and published principles for determining price differentials.

In ARTC's view, many of these changes address the concerns expressed by stakeholders during regulatory consultation in relation to the approach to pricing inherent in the NSW Rail Access Regime and NSWRAU, including the NSW Minerals Council (via HRATF) representing export coal producers in rail access matters at the time.

The current 2-part, GTK based Pricing Zone approach was introduced to address industry concerns and permit pursuit of desirable pricing objectives. Whilst an approach that introduced pricing that was expressed in terms of Pricing Zones may give the impression that revenue is being identified by specific Pricing Zones, this is not intended and is not recognised in the pricing objectives at Section 4.13 of the HVAU. Irrespective of the approach to pricing, revenue for each mine could be determined for the purpose of testing (individually or in combination) against relevant floor and ceiling revenue limits under the HVAU.

As such, the introduction of a new approach to pricing under the HVAU was not expected to have any impact on the application of the floor/ceiling tests carried over by ARTC from the NSWRAU to the HVAU.

4.3 Annual Compliance Assessments

4.3.1 2011 H2 Assessment and Earlier Assessments under the NSWRAU

As a result of the timing of the ACCC approval of the HVAU in 2011, the initial compliance assessment carried under the HVAU related to a half year compliance period (1 July 2011 – 31 December 2011) (**2011 H2 Assessment**). The HVAU provides for an annual compliance assessment and the design of the Ceiling Limit, unders and overs account, and RAB and RAB Floor Limit roll forward, under the HVAU is intended to align to a full calendar year. As such, it was necessary for ARTC and the ACCC to agree minor adjustments to the design of these elements of the HVAU, on a transitionary basis to apply to 2011 H2 Assessment only, in order for these elements to operate effectively over a half year period. The design of these elements, as agreed between ARTC and the ACCC, was set out Attachment 2 to ARTC's compliance submission.

ARTC does not consider that any aspects of the agreed design adjustments had any material impact on the determination of the revenue limits and the application of the ceiling test for the compliance period.

ARTC initially submitted its compliance submission to the ACCC on 1 June 2012. Following consultation with the ARTC and stakeholders over the following ten months, including several revisions to the compliance submission, the ACCC approved ARTC's revised submission submitted on 8 March 2013, on 5 April 2013, as compliant with the HVAU.

In all versions of ARTC's submission over this period available to the ACCC and/or for stakeholder consultation, ARTC provided a summary of the results of the ceiling test model for the Constrained Network[20]. In providing this summary, Section 7.1 of the compliance submission describes the basic operation of the ceiling test model, states that the combination of mines that is closest to, or exceeds the economic cost for the relevant Network Segments is called the Constrained Group of Mines and the Segments comprise the Constrained Network, and states that the summary provided relates to the Constrained Network.

Further, under the HVAU, the Constrained Group of Mines is defined as:

"Constrained Group of Mines" *means the group of mines and unloading points that are serviced by Coal Trains where the operation of those Coal Trains is entirely within the Constrained Network, and where access revenue on those Segments forming the Constrained Network is:*

(a) closest to if less than; or

[20] ARTC, 1 July to December 31 2011 Submission to the ACCC in respect of HVAU Roll Forward Asset Base, Ceiling Test, Unders and Overs Account Resubmitted February 2013, Table 7

(b) exceeds by the largest amount;

the Economic Cost for the Constrained Network;

and the Constrained Network is defined as:

***"Constrained Network"** means the group of Segments within the Network bounded by the mine loading points and the Newcastle port where access revenue on those Segments is likely to reach or exceed Economic Cost for those Segments on a stand alone basis;*

Based on this, ARTC considers that it should be reasonably clear that revenue included in the summary of the results of the ceiling test model for the Constrained Network provided as part of the compliance submission:

- includes revenue associated with all mines serviced by Coal Trains where the operation of those Coal Trains is entirely within the Constrained Network; and

- any revenue associated with the operation of Coal Trains servicing mines outside of the Constrained Network would not be included.

In providing the summary, Section 7.3 of the compliance submission also details the costs included in Economic Cost for the Constrained Network. Such costs include all fixed maintenance costs identified with the Constrained Network, as well as maintenance overheads, network control costs and system overheads allocated to the Constrained Network. Appendices D and E of the compliance submission provide detail as to the RAB Floor Limit Roll Forward and Depreciation calculation for Segments forming part of the Constrained Network that aligns to the Average Asset Base (used to determine Return on Assets) and Depreciation as specified for the Constrained Network in the summary provided.

Based on the above advice and information provided in the compliance submission, ARTC considers that it should be reasonably clear that Economic Cost for the Constrained Network in the summary provided includes all cost identified with or allocated to Segments forming part of the Constrained Network.

ARTC therefore contends that it should be reasonably clear that the summary of the results of the ceiling test model for the Constrained Network provided in the compliance submission represents a test of revenue for the Constrained Group of Mines (those mines serviced by Coal Trains that operate entirely within the Constrained Network) only against the Economic Cost of all Segments forming part of the Constrained Network, including all cost associated with those Segments.

ARTC contends that it should also be reasonably clear that revenue associated with Coal Trains servicing mines existing outside of the Constrained Network (e.g. Gunnedah Basin mines, southern mines) and revenue associated with non-Coal Trains is not included in the test. Such revenue is only relevant to testing against the Floor Revenue Limit on Segments forming part of the Constrained Network.

These contentions are underpinned by what ARTC considers to be a reasonable assumption in relation to the level of understanding that relevant stakeholders may have in relation to these aspects of ARTC compliance submission given the extent of advice provided by ARTC, and opportunity for consultation made

available during the development, and the ACCC's assessment of the HVAU. This is further explored at section 5.2.2 of this submission.

The summary of the results of the ceiling test model for the Constrained Network, and advice similar to that provided above, has also been provided as part of compliance submissions made in relation to the NSWRAU by ARTC with respect to financial years before 2011 H2 since 2004-05.

Over this period a number of stakeholders have been consulted during the regulatory assessment including rail operators, mining companies and the NSW Minerals Council. During this period, ARTC does not recall any query being raised, or further clarity being sought in relation to the summary of the results of the ceiling test model for the Constrained Network, and the nature and application of the ceiling test for the Constrained Network.

4.3.2 2012 Assessment

Stakeholder Consultation

ARTC provided its initial compliance submission to the ACCC in relation to the 2012 calendar year on 30 April 2013 and a revision on 24 May 2013.

On 12 June 2013, the ACCC published a Consultation Paper[21] in relation to ARTC's compliance with the HVAU for the 2012 calendar year, and seeking submissions from stakeholders. A listing of stakeholders including rail operators, relevant coal mining companies and industry bodies is provided to the ACCC as part of the annual compliance submission in order to assist with the consultation.

In that Paper, the ACCC made specific reference to the Ceiling Test at Section 2.3 as follows:

'The ceiling test for segments in Pricing Zones 1 and 2 requires that access revenue from any Access Holder or group of Access Holders must not exceed the Economic Cost of those segments which are required on a standalone basis for the Access Holder or group of Access Holders (see clause 4.3(a) of the HVAU).

ARTC's ceiling test model calculates the amount of access revenue and the Economic Cost across the segments utilised by a mine or combination of mines. The combination of mines that is closest to, or exceeds, the economic cost for the relevant segments is called the 'Constrained Group of Mines' and the segments comprise the 'Constrained Network'.

ARTC's submission states that access revenue collected and used as the basis for determining allocations of the total 'unders and overs' amount for the Constrained Network during the 2012 Compliance Period amounts to $241.82 million.[22]

[21] ACCC, Consultation Paper Australian Rail Track Corporation's compliance with pricing principles in the Hunter Valley Rail Network Access Undertaking for 2012, 12 June 2013

[22] ARTC, Submission, 24 May 2013, p. 21

Economic cost is defined under clause 4.5 of the HVAU, and includes both segment specific and non-segment specific costs. ARTC's total economic cost for the Constrained Network during the 2012 Compliance Period was $247.55 million.[23]

This cost comprises the following components:

- *depreciation of $54.75 million;*
- *net loss on disposal of $2.15 million;*
- *return on assets of $98.32 million;*
- *total maintenance costs of $69.23 million;*
- *expensed project costs of $1.50 million;*
- *network control costs of $9.30 million; and*
- *corporate overheads of $12.31 million.*

As access revenue was less than economic cost, the reconciliation has determined an under-recovery of $5.73m for the 2012 Compliance Period.' [24]

As such, in seeking submissions from stakeholders the ACCC has explicitly drawn the attention of stakeholders to the application of the ceiling test for the Constrained Network and Constrained Group of Mines, as presented by ARTC in the summary for the 2012 calendar year.

Submissions to the Consultation Paper were received from 5 stakeholders including four coal mining companies and a rail operator.

Upon review of submissions, ARTC was unable to identify any query being raised, or further clarity being sought, in relation to the summary of the results of the ceiling test model for the Constrained Network, and the nature and application of the ceiling test for the Constrained Network.

ACCC Information Requests

Following the receipt of stakeholder submissions and its own internal review of ARTC's compliance submission and financial modelling confidentially provided to the ACCC in accordance with Schedule G of the HVAU, the ACCC directed confidential formal information requests to ARTC in August and October 2013.

In the October 2013 information request following informal discussions with ARTC in relation to the 2012 compliance submission in October 2013, the ACCC specifically sought confirmation of its understanding of what it considered appeared to be a 're-allocation' of Access Revenue between Coal Customers between certain segments of the network.

[23] ARTC, Submission, 24 May 2013, p. 20

[24] ACCC, op. cit.,Section 2.3, p7

ARTC Response

In its confidential response to the ACCC, ARTC sought to explain that, consistent with the application of the ceiling test to the Constrained Network (as summarised in the annual compliance submission as described above), the ceiling test only compares Access revenue for the Constrained Group of Mines against the Economic Cost of the Constrained Network. Access revenue in relation to unconstrained coal hauls (hauls from mines that are outside of the Constrained Network) is not included. As such, the allocation of revenue for these hauls is allocated away from the Constrained Network to unconstrained (other) parts of the Hunter Valley coal network where possible.

ARTC Presentation to the ACCC

Following ARTC's response to its formal information requests, the ACCC sought further discussions with ARTC in relation to revenue allocation. On 19 December 2013, ARTC made a confidential presentation to ACCC officers in relation to the following:

- Historical practice in relation to the application of the Stand-Alone Combinatorial (SAC) Ceiling Test under the NSWRAU and HVAU, and the intended objectives of the test to eliminate monopoly rents and cross-subsidisation.

- How the SAC Ceiling Test works in a constrained network, and in a network that has both constrained and unconstrained parts.

- Historical cost recovery and revenue allocation in relation to the Ulan line in the early to mid-2000's.

- Forecast cost recovery and revenue allocation in relation to the Gunnedah Basin lines over the next 5 years, and the impact of loss capitalisation.

- Consideration of the implications of revenue for efficient pricing and investment.

A number of aspects of the presentation have been incorporated in this submission.

ARTC Senior Executive Officer Representation

Following ARTC's presentation to ACCC officers in December, ARTC sought to further inform the ACCC of the impact of constraining the pricing flexibility inherent in the application of the Floor and Ceiling Revenue Limits under the HVAU, and manifesting in the allocation of revenue, would have on pricing and investments incentives for ARTC in both the constrained, and particularly the unconstrained, parts of the Hunter Valley coal network. ARTC arranged a meeting between its relevant senior executives, and the relevant ACCC Commissioner and officers.

2012 Compliance Determination and a formal letter from ARTC to the relevant ACCC Commissioner

Upon becoming aware that it was likely that the ACCC would accept ARTC compliance with the HVAU for the 2012 calendar year (based on ARTC revised submission dated February 2014), but intended to conduct a review of the practice of revenue allocation under the HVAU shortly afterwards, ARTC provided a formal letter stating its views in relation to what it perceived might be the ACCC's concerns, possible adverse impacts on pricing and investment incentives, and the uncertainty about future pricing and investment in the Hunter Valley that may be introduced by such a review only 3 years after HVAU commencement.

A number of aspects of the letter have been incorporated in this submission. ARTC notes that no response to the letter was been received from the ACCC.

In the 2012 Compliance Determination, the ACCC determined that ARTC's reconciliation of revenues received with the applicable floor and ceiling limits for the 2012 Compliance Period complied with the requirements of the HVAU.

In relation to the matter of revenue allocation, the 2012 Compliance Determination states:

'*In relation to ARTC's approach to revenue allocation, the ACCC understands that the effect of ARTC's approach is that producers originating in Pricing Zone 3 pay only for the direct costs (defined in the HVAU as variable maintenance costs) as they traverse the rail network in Pricing Zone 1. As such, all of the remaining operating and capital costs of the rail network in Pricing Zone 1 are incurred by producers originating in Pricing Zones 1 and 2 even though they are unable to utilise the full capacity of that part of the network due to Pricing Zone 3 traffic.*[25] *ARTC submitted that its approach to revenue allocation is the outcome of the application of the combinatorial model.*

The ACCC was of the view that it was important to consider the appropriateness of ARTC's approach to revenue allocation and the subsequent impact on cost recovery. The ACCC therefore sought further information from ARTC in relation to the approach to revenue allocation and its compliance with the HVAU. ARTC confidentially provided information to the ACCC which explained the basis for the approach and the effect of the approach on access charges. In particular, ARTC noted that its approach was accepted under the New South Wales Rail Access Undertaking (NSWRAU), overseen by the NSW Independent Pricing and Regulatory Tribunal (IPART). ARTC has retained its approach taken under the NSWRAU for the 2012 Compliance Period under the HVAU.'[26]

'*The ACCC … considers that there is value in also having a review which will consider issues such as the provision of information to stakeholders and the methodologies underpinning revenue allocation across the Hunter Valley coal network. The ACCC considers that such a review will assist in increasing transparency and informed decision making. Accordingly, the ACCC intends to undertake a public review in which stakeholders will be provided with an opportunity to submit their views.*' [27]

[25] This occurs while PZ3 is part of the 'unconstrained' network and 'loss capitalisation' applies.

[26] 2012 Compliance Determination, p6

[27] Ibid., p7.

5 TRANSPARENCY

This section will show how the extent of public disclosure, and opportunity for stakeholder consultation, during the assessment of the HVAU by the ACCC as well as relevant compliance reviews. This has provided a reasonable basis for effectively informing, and consulting with, relevant stakeholders on the approach to revenue allocation arising from the application of the floor and ceiling tests under the HVAU and NSWRAU. As few, if any, concerns have been raised regarding in the past, it is considered reasonable to conclude that the information provided has been sufficient to inform business and investment decisions and that the revenue allocation practice was not considered controversial. However, if this is not the case, ARTC welcomes any specific and targeted feedback on where this needs to be improved.

The ACCC has indicated questions of particular interest to it relating to the review as prescribed at section 2.3 of the Discussion Paper.

In relation to the matter of transparency, relevant questions include:

1. What information has ARTC provided to stakeholders about its revenue allocation practices?

2. To the extent that ARTC has provided information on revenue allocation, has it been sufficient to understand how ARTC allocates revenue across Segments of the network?

3. Do stakeholders consider they have sufficient information about ARTC's revenue allocation/reconciliation processes to make informed business and investment decisions? If not, please provide reasons why.

Other than prescribing these questions of interest, the ACCC has provided no further guidance in the Discussion Paper in relation to concerns or issues it may have in this regard.

However, ARTC notes the following relevant statements made by the ACCC in the 2012 Compliance Determination on ARTC's compliance with the financial model and HVAU Pricing Principles for January – December 2012.

'*ARTC's approach to revenue allocation was set out in confidential information provided in support of its Initial Compliance Submission. As such, stakeholders were not given an opportunity to comment on the approach during the ACCC's public consultation*.'[28]

'The annual compliance assessment under the HVAU provides for the ACCC to determine whether ARTC's calculations relevant to the reconciliation of access

[28] Ibid., p20

revenue are in accordance with the HVAU. In this regard, the ACCC notes that the HVAU does not specify how revenue is to be allocated to particular pricing zones or segments for the purposes of compliance with the revenue cap. However, the HVAU does include objectives such as:

- *the use of transparent and detailed methodologies, principles and processes for determining Access revenue limits, terms and conditions (clause 1.2(c));*

- *reaching an appropriate balance between the legitimate business interests of ARTC, the interest of the public, and the interests of applicants seeking access rights to the network, including providing access in a transparent, efficient and non-discriminatory manner (clause 1.2(d)); and*

- *operating consistently with the objectives and principles in Part IIIA of the CCA and the Competition Principles Agreement (clause 1.2(e)). The objects of Part IIIA include promoting the economically efficient operation of, use of, and investment in infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets.*'[29]

'*The ACCC … considers that there is value in also having a review which will consider issues such as the provision of information to stakeholders and the methodologies underpinning revenue allocation across the Hunter Valley coal network. The ACCC considers that such a review will assist in increasing transparency and informed decision making. Accordingly, the ACCC intends to undertake a public review in which industry stakeholders will be given an opportunity to provide their views.*'[30]

The above statements suggest some concern that stakeholders were given no opportunity to comment on revenue allocation during the consultation, and that stakeholders may not be aware of the approach to revenue allocation which may not be consistent with the HVAU objectives, specifically 'the use of transparent and detailed methodologies, principles and processes for determining Access revenue limits, terms and conditions (clause 1.2(c))'.

The relevant questions of interest prescribed in the Discussion Paper suggest some concern that relevant stakeholders may not be aware of the approach to revenue allocation in any event, and that ARTC may have not provided sufficient information to enable stakeholders to become aware of the approach to revenue allocation.

As an overall comment, ARTC wishes to clarify that it has not sought at any time to be anything less than transparent in relation to the approach with the ACCC (or IPART) or stakeholders either during the development of the HVAU or in complying with the HVAU since its commencement. ARTC has provided substantial financial documentation and ceiling test calculations to the ACCC for review and assessment.

In the following parts of this section, ARTC aims to demonstrate previous advice and information provided, as well as opportunities for consultation, that were carried out in the public domain.

[29] Ibid., p20.

[30] Ibid., p24.

5.1 Transparency during consultation on ARTC's 2012 compliance submission

With regard to the specific information provided to the ACCC confidentially in relation to the approach to revenue allocation during consultation on ARTC compliance with the HVAU for the 2012 calendar year, the information was provided in relation to the financial model confidentiality submitted to the ACCC as part of its compliance submission and in response to an unpublished information request from the ACCC. The confidential treatment of the financial modelling submitted by ARTC and related information sought by the ACCC is explicitly provided for at Schedule G Clause 2(b)(vi) and Schedule G Clause 4(a) of the HVAU.

5.2 Broader concerns in relation to transparency of the approach to revenue allocation

5.2.1 Historical context

As stated above, ARTC has been open as to its approach with the ACCC (or IPART) and stakeholders during the development of the HVAU and in complying with the HVAU since its commencement.

ARTC submissions to stakeholders during earlier development of the HVAU, during the ACCC consultation process leading to approval of the HVAU, and during compliance assessments since commencement of the HVAU have been guided by ARTC's experience historically with economic regulation of the Hunter Valley coal network under the HVAU. ARTC's relevant experience commenced in the early 2000's and was underpinned by:

- Knowledge that the pricing principles under the NSWRAU and earlier NSW Rail Access Regime, including the stand-alone combinatorial ceiling test and inherent pricing flexibility was extensively reviewed by both IPART[31] and the National Competition Council[32], and subject to extensive public consultation including both rail operator[33] and coal industry[34] representation in the late 1990's. As part of the above IPART review, the question of access pricing and cost recovery in relation to parts of the Hunter Valley coal network that were constrained and unconstrained was explicitly presented for consultation as part of IPART's Issues Paper[35] and is re-produced at Appendix 2 to this submission.

- Knowledge that, at the time, it was recognised that the prescribed Hunter Valley coal network contained Category 1 mines where recovery of economic

[31] IPART, Aspects of the NSW Rail Access Regime, 1998/99

[32] NCC, Application for Certification of The NSW Rail Access Regime, 1997/98

[33] Historical evidence indicates that National Rail Corporation and FreightCorp, both rail operators in the Hunter Valley, participated in the IPART and NCC reviews through submissions and/or public hearings.

[34] Historical evidence indicates that NSW Minerals Council, representing the Hunter Valley coal industry participated in the IPART and NCC reviews through submissions and/or public hearings.

[35] IPART, Aspects of the NSW Rail Access Regime, Issues Paper, October 1998, Appendix B, Cost Allocation and Pricing Issues.

cost through access revenue, at least, was being achieved[36], and Category 2 mines where recovery of less than economic cost was being achieved[37].

- An understanding that the financial modelling used by ARTC's predecessor in the Hunter Valley, Rail Infrastructure Corporation (**RIC**) (earlier known as Rail Access Corporation) has been accepted by IPART, and knowledge that this was used to underpin annual compliance assessments accepted by IPART during the early 2000's. Annual compliance assessments at this time were subject to public consultation. The financial model used by RIC was provided to ARTC upon commencement of ARTC lease in 2004-05 and was substantively used to underpin ARTC's compliance submissions accepted by IPART from 2004-05 to 2010-11. ARTC's financial modelling used during development of the HVAU and in recent compliance assessments under the HVAU has been largely modelled on the RIC financial model.

Given this historical experience during development of the HVAU, ARTC does not consider it unreasonable to assume that stakeholders at the time, including the representation from the coal industry, would have been aware of, and understood, the application of the revenue limits and floor/ceiling tests under the NSWRAU, and the implications for the Hunter Valley coal network which consisted of both constrained and unconstrained mines historically. Stakeholders, including coal industry representatives, had been given previous opportunities to understand, consider and provide formal submissions on the application and consequences for access pricing and cost recovery on different parts of the Hunter Valley coal network.

During development of the HVAU, ARTC made it clear that it was not seeking to alter the nature and application of the revenue limits and floor/ceiling tests under the HVAU. At the time of development of and consultation on the HVAU it would have been well understood that the Hunter Valley would have still consisted of constrained (central Hunter Valley and Ulan line mines) and unconstrained mines (Gunnedah Basin mines). ARTC therefore does not consider it unreasonable to assume that stakeholders at the time, including coal industry representatives, would have been aware of, and understood, the application of the revenue limits and floor/ceiling tests under the HVAU, and the implications for the Hunter Valley coal network which still consisted of both constrained and unconstrained mines.

5.2.2 Transparency during development of, and consultation, on the HVAU

Despite what ARTC considers would have been a reasonable assumption regarding stakeholder understanding of these relevant aspects of the HVAU Pricing Principles, and the implications for access pricing and cost recovery on parts of the Hunter Valley coal network under the HVAU going forward, ARTC still sought to be transparent in relation to these relevant aspects, and certainly did not seek to impede transparent consultation on these relevant aspects during development of,

[36] Category 1 mines were, at the time, utilising 11 loading points: Bloomfield, Branxton, Camberwell, Dartbrook, Drayton, Hunter Valley, Liddell, Mt. Owen, Mt. Thorley, Newdell, Pelton, Rix's Creek, Saxonvale and Bengalla.

[37] Category 2 mines were, at the time, Ulan, Stratford, Newstan and Teralba.

and consultation with stakeholders on the HVAU either before or during the ACCC's assessment.

As stated earlier, the utilisation of a combinatorial test in the HVAU and in the NSWRAU has resulted in significant pricing flexibility to be afforded to the relevant infrastructure provider, enabling pricing objectives other than cost recovery to be pursued often resulting in benefits to the infrastructure provider and users. The ability to allocate revenue to parts of the network inherent in the combinatorial ceiling test enables the infrastructure to still operate within regulatory constraints, seeking to ensure that only the efficient costs of service provision are recovered, and there is no cross-subsidisation between parts of the infrastructure or between users of the infrastructure.

The observance of these constraints under the HVAU was vigorously pursued by the ACCC during its assessment of the HVAU.

Under the HVAU, ARTC recognised that relevant Hunter Valley users would be coal producers and that the focus of any consultation in developing the HVAU should be on coal producers.

In ARTC's initial HVAU application to the ACCC/ARTC explicitly expressed that the ability to allocate revenue is an inherent part of the combinatorial nature of the Ceiling Test and the basis upon which revenue would be allocated to parts of the network.

At page 100 of the Explanatory Guide provided by ARTC in support of its initial HVAU application to the ACCC in April 2009, ARTC provided the following information when explaining the combinatorial nature of the ceiling limit, and revenue allocation, under the HVAU.

'Combinatorial pricing approach

Under the combinatorial pricing approach, prices are set within a floor (incremental cost) and ceiling (total economic cost) limit.

Costs for each route are allocated to the relevant route section. In broad terms, revenue is allocated to cover the costs attributable to particular route sections in an order of priority, as follows:

- *incremental costs of all applicable route sections;*

- *up to the ceiling on all applicable branch or feeder (dedicated) route sections; and*

- *up to the ceiling on all applicable shared route sections.*

This approach ensures that the costs of dedicated lines are recovered as a priority. Any additional revenue earned above incremental costs then goes to the feeder lines and then the main lines. The combinatorial pricing approach has two important benefits that ARTC considers are important in the context of the asset roll-forward capitalisation approach. First, it will avoid cross subsidisation between route sections. Second, recovery of capital costs on branch or feeder lines has higher priority than shared lines on the basis these are dedicated lines and, unless these costs are recovered, the lines may close (or not be built in the first place).

Accordingly, this approach reduces the risk of under-recovery of costs on dedicated lines, thereby facilitating investment in expanding the network in these areas

As a result of applying the combinatorial approach, capitalised shortfalls on relevant Segments would be recovered from users of those line segments and no other mines. This is essentially a cost allocation process and subsequent recovery of the allocated costs. ARTC recognises the sensitivities surrounding such a cost allocation process, in particular, the allocation of common costs.

Consequently, transparency of the cost allocation process to the regulator will be important to provide comfort to producers and operators that no cross-subsidisation is taking place.'

Some of the above words were also duplicated by the ACCC in its Draft Decision[38] (5 Mar 2010).

In including this explanation of the combinatorial pricing approach in its application, ARTC has sought to inform the ACCC and stakeholders:

- that revenue is allocated to parts of a journey, within floor and ceiling constraints (preventing cross-subsidy);
- the basis (priority) of that allocation;
- the outcome of that allocation, being that feeder lines (PZ3) get revenue first then shared lines (PZ1); and
- the benefits of the approach, mainly being to retain feeder lines and encourage investment in feeder lines.

ARTC considers that it has been sufficiently transparent in this process.

Both ARTC's application and the Draft Decision were published by the ACCC for stakeholder consultation.

It should be noted that ARTCs initial HVAU application in April 2009 was not the first time coal producers and the ACCC were informed of, and provided an opportunity to comment on, the combinatorial nature of the ceiling, and revenue allocation, proposed under the HVAU. Indeed, during earlier industry consultation in July 2008, ARTC provided to coal producers[39], other stakeholders and the ACCC[40] a preliminary consultation draft of the HVAU and an accompanying explanatory guide. At listing of all stakeholders to which these documents were sent is provided at Appendix 3. At page 42 of the explanatory guide provided at this earlier time, similar advice to the above was provided for consultation. Subsequent to the provision of these documents, ARTC arranged an industry forum and carried out a presentation on the proposed HVAU to around 50 relevant stakeholder representatives in Sydney on 24 July 2008. Following questions and

[38] p 517.

[39] Letter from ARTC Chief Executive Officer to relevant stakeholders (refer Appendix 3) dated 14 July 2008, and attached documents. Explanatory Guide p42.

[40] Letter from ARTC Chief Executive Officer to ACCC (Acting General Manager Transport) dated 14 July 2008, and attached documents. Explanatory Guide p42.

issues raised by stakeholders at that forum, stakeholders were provided an opportunity to make comment on ARTC's proposals and engage in further consultation. As was the practice at that time, the industry elected to engage with ARTC in consultation and on development of the HVAU through the HRATF and certain key coal producers. ARTC engaged in consultation with these stakeholders over the following 10 months prior to the initial HVAU application, including responding to requests for further explanation in relation to the proposed pricing principles.

Other documents provided publicly by ARTC during the ACCC's public consultation on the HVAU included explanatory guides describing the process used by ARTC to determine Interim Indicative Access Charges proposed as part of the HVAU. Relevant explanatory guides were provided to the ACCC and published on the ACCC's website for consultation in October 2009[41] and again in August 2010[42]. Both of these documents provide a detailed description of the development of Revenue Limits under the HVAU, and the application of the proposed combinatorial, stand-alone ceiling test and explicitly referred to a key implication of the proposed test as follows:

'*This approach [combinatorial stand alone ceiling test] will result in revenue for a particular combination of coal traffics that is nearest to, or exceeds, the Economic Cost of the Segments used by that combination. Revenue for this combination of traffics must be no more than the relevant Economic Cost or revenue (and prices) is therefore constrained. This combination is known as the Constrained Group of Mines and the Segments covered by the Constrained Group of Mines forms the Constrained Network. Revenue and pricing for all coal traffic occurring entirely within the Constrained Network is constrained to the Economic Cost of the Constrained Network. This would include any coal traffic from mines within the Constrained Network to the Newcastle ports (export), or to domestic coal destinations within the Constrained Network*.'[43]

This makes it quite clear that Access revenue for only those coal traffics that are operated entirely within the Constrained Network (to haul coal from the mines within the Constrained Network to Newcastle ports) is constrained to the Economic Cost of the Constrained Network, and so would meet that cost. It would follow that Access revenue associated with other traffics that do not form part of the Constrained Group of Mines (coal and non-coal traffics that operate partly outside of the Constrained Network) do not contribute to recovery of Economic Cost of the Constrained Network. As such, the Revenue limits under the HVAU, and associated combinatorial stand alone ceiling test would operate to allocate only revenue equivalent to Direct Cost to Segments forming the Constrained Network for these traffics (floor limit).

Similar to the opportunity provided to stakeholders in the Hunter Valley, including the coal industry, in the late 1990's by regulators at the time to become aware of,

[41] ARTC Hunter Valley Access Undertaking 2009, Explanatory Guide – Supplementary Information – Interim Indicative Access Charges, October 2009.

[42] ARTC Explanatory Guide 2010 HVAU, Appendix 7 – ARTC revised Interim Indicative Access Charges, August 2010.

[43] ARTC Hunter Valley Access Undertaking 2009, Explanatory Guide – Supplementary Information – Interim Indicative Access Charges, October 2009, p22 and ARTC Explanatory Guide 2010 HVAU, Appendix 7 – ARTC revised Interim Indicative Access Charges, August 2010, p18.

understand, and provide comment on, these relevant aspects of the NSW Rail Access Regime (at the time), ARTC considers that it informed the ACCC and stakeholders of these relevant aspects on multiple occasions during development of the HVAU between mid-2008 and mid-2011, and provided further opportunities for stakeholders, including the coal industry, to become aware of, understand, and provide comment on, these relevant aspects of the HVAU.

Active coal industry stakeholders at the time included large multi-national coal producers who have been operating the Hunter Valley for many years, as well as the industry representative body (HRATF). ARTC expects such stakeholders to have been sufficiently sophisticated in dealing with the concepts underpinning economic regulation in relation to the Hunter Valley coal network, or would have had access to sufficient qualified resources to have become aware of, understand, and provide comment on if necessary, the concept of revenue allocation and its implications in relation to the Hunter Valley coal network going forward.

Given ARTC's above disclosure as part of its initial HVAU application submitted to the ACCC for extensive consultation carried out over two years (where the ACCC does not limit the content of submissions to only address those issues that the ACCC may raise in consultation documents) and in industry consultation documents provided nearly a year earlier, ARTC contends that the coal industry had been provided with a reasonable opportunity to provide comment on, if it was minded to do so, the concept of revenue allocation and its implications in relation to the Hunter Valley coal network going forward.

Stakeholders were afforded further opportunities to become aware of, understand, and provide comment on, these relevant aspects of the HVAU during consultation in relation to the ACCC Draft Decision (5 March 2010) at section 12.5 'ARTC's floor and ceiling price and revenue limits', and Position Paper at section 5.7 'Revenue Allocation'.

During the ACCC's consultation (or earlier industry consultation), ARTC was unable to identify any relevant concerns expressed by stakeholders, including coal industry representatives, in submissions, nor any indication that further explanation was needed in order to understand the approach to revenue allocation. Given this and the context under which ARTC was operating at the time as described above, ARTC saw no reason to publicly provide further information in relation to these relevant aspects of the HVAU.

Indeed, given the absence of any concerns expressed in submissions, ARTC contends that it would be reasonable to assume that coal industry representatives accepted the approach.

Had either the ACCC or coal industry representatives, sought further information in the regard, ARTC would have provided it.

As such, and given all of the above historical evidence, ARTC contends that it should be understood by stakeholders that:

- revenue from PZ3 journeys (after being allocated to all journey Segments to recover the floor) would next be allocated to PZ3 Segments (being Segments

dedicated to PZ3 users), and then PZ1 Segments (being shared route Segments);

- a direct outcome of this is that where revenue was insufficient to recover Economic Cost in PZ3 that no revenue (other to recover floor) would be allocated to PZ1 Segments.

This would be undertaken in order to determine compliance with the HVAU in subsequent annual compliance assessments.

An identical situation occurred in relation to PZ2 journeys up until around 2006-07, and has occurred in relation to non-coal journeys using PZ1 Segments since 2000.

As a result of the above disclosure and consultation, ARTC does not agree with the suggestion that either the concept of revenue allocation, nor its implications, have not been dealt with in a transparent manner.

Further, the presence of combinatorial ceiling tests in other regulated rail jurisdictions such as Queensland and Western Australia, would have given rise to pricing flexibility and the allocation of revenue in order to demonstrate compliance with revenue limits. The over-payment rules accepted by the Economic Regulation Authority of Western Australia for Brookfield Rail and The Pilbara Infrastructure both explicitly prescribe priorities for revenue allocation on a similar basis to that described above. ARTC would expect that the publishing of such rules (and the priorities for revenue allocation) under regulation in Western Australia would have been intended to provide a sufficient level of transparency to users of the Brookfield and Pilbara rail networks. ARTC notes that a number of the larger coal producers in the Hunter Valley also utilise these minerals networks in Queensland and WA.

ARTC contends that the above public disclosure and opportunity for stakeholder consultation during the assessment of the HVAU by the ACCC (and earlier industry consultation) provided a reasonable basis for effectively informing the coal industry's understanding of the approach to revenue allocation at the time, and in current business processes provided under the HVAU such as price determinations and investment decisions by the RCG.

5.2.3 Transparency in relation to making informed business and investment decisions

With particular reference to the question raised by the ACCC in the Discussion Paper 'Do stakeholders consider they have sufficient information about ARTC's revenue allocation/reconciliation processes to make informed business and investment decisions?', ARTC has demonstrated that it has provided a reasonable basis for effectively informing current business processes provided under the HVAU such as price determinations and investments decisions by the RCG.

It is ARTC's view that it is not unreasonable that stakeholders *should* have had reasonable information about ARTC's revenue allocation/reconciliation processes to make informed business and investment decisions.

As this question is directed to stakeholders for their consideration, it will be up to stakeholders to consider whether they have reasonable information about ARTC's revenue allocation/reconciliation processes to make informed business and investment decisions.

ARTC accepts that the public disclosure and opportunity for stakeholder consultation during the assessment of the HVAU by the ACCC, referred to above, occurred 3 to 5 years ago. However, the nature of the revenue limits and the floor/ceiling tests (including the approach to revenue allocation) has been a long term feature of economic regulation of the Hunter Valley coal network for over 15 years, and its understanding should be entrenched.

ARTC accepts that over time, relevant stakeholder decision makers change and it is possible that stakeholder understanding of some aspects of the economic regulation of the Hunter Valley coal network may alter or become lost. ARTC considers retention of stakeholder knowledge over time is best managed by the internal process of stakeholders rather than by the regulated infrastructure owner or the regulator.

5.2.4 Conclusion

In this section, ARTC has sought to respond to the first of the ACCC's questions raised in the Discussion Paper.

'*What information has ARTC provided to stakeholders about its revenue allocation practices?*'

ARTC has sought to demonstrate that the public disclosure and opportunity for stakeholder consultation during the assessment of the HVAU by the ACCC provided a reasonable basis for effectively informing, and consulting with, relevant stakeholders on the approach to revenue allocation arising from the application of the floor and ceiling tests under the HVAU and NSWRAU, and that the response by stakeholders and the ACCC was such that it was reasonable for ARTC to assume the information provided was sufficient to inform business and investment decisions, and that the practice was not considered to be controversial.

Other questions raised in the Discussion Paper afford stakeholders with the opportunity to identify any specific aspects of the practice where stakeholders think that information provided in the past has not been sufficient and where additional transparency may be required. ARTC is unable to respond to these questions, but would be open to relevant and targeted feedback on any specific areas of concern that stakeholders may have and suggestions for improvement.

6 COMPLIANCE

To the extent that the ACCC has inferred that ARTC somehow is, or has not been, compliant with the HVAU, this section will briefly examine recent compliance reviews and demonstrate how ARTC has been compliant.

As indicated at sections 3.1 and 3.2 of this submission, the ACCC has advised that the purpose of this review is to assess the level and adequacy of transparency of information provided to stakeholders on ARTC's current revenue allocation process. The ACCC has also indicated that this purpose reflects the objectives of the HVAU (specifically section1.2(c) of the HVAU) and that information gathered from stakeholders during this review may inform related processes, including compliance with the financial model and HVAU Pricing Principles for the 2013 calendar year (and subsequent years until the expiry of the current HVAU).

Despite ARTC having received indications from ACCC staff that any changes would not be made retrospectively and that it was not seeking to imply that ARTC is not compliant with the existing HVAU or during the remainder of the term of the existing HVAU, this indicates to ARTC that the ACCC may be seeking to consider whether the adequacy of transparency of information provided to stakeholders on ARTC's current revenue allocation process is, and will remain, compliant with the current HVAU until its expiry. As such, ARTC seeks to express its views in relation to the matter of compliance with the HVAU in this section of the submission.

Key provisions that have been identified by the ACCC in the Discussion Paper and the 2012 Compliance Determination in relation to ARTC's compliance with the HVAU for 2012 (as indicated at section 4 to this submission) as relevant to a consideration of ARTC's compliance in this regard with the HVAU are:

- The Floor Limit and Ceiling Limit (and attendant tests of revenue) prescribed at sections 4.2 and 4.3 of the HVAU; and
- The intent of the HVAU prescribed at section 1.2 of the HVAU being, among other things,
    - the use of transparent and detailed methodologies, principles and processes for determining Access revenue limits, terms and conditions (clause 1.2(c));
    - reaching an appropriate balance between the legitimate business interests of ARTC, the interest of the public, and the interests of applicants seeking access rights to the network, including providing access in a transparent, efficient and non-discriminatory manner (clause 1.2(d)); and
    - operating consistently with the objectives and principles in Part IIIA of the CCA and the Competition Principles Agreement (clause 1.2(e)). The objects of Part IIIA include promoting the economically efficient

operation of, use of, and investment in infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets.

In both the Discussion Paper and the 2012 Compliance Determination, the ACCC has recognised that the HVAU '*does not specify how revenue from charges is to be allocated to particular Pricing Zones or Segments for the purposes of compliance with the combinatorial matrix in sections 4.2 and 4.3 of the HVAU*'[44].

ARTC contends that the absence of prescription as to how revenue from charges is to be allocated to particular Pricing Zones or Segments for the purposes of compliance with the combinatorial matrix in sections 4.2 and 4.3 of the HVAU is, and has been under earlier regulatory instruments, a fundamental underpinning of the pricing flexibility afforded to the track owner under the stand-alone combinatorial ceiling test approach, that permits the track owner to pursue other objectives in pricing such as revenue adequacy and efficiency incentives. A number of these objectives, not explicitly referred to in the NSW Rail Access Regime/NSWRAU are now specifically referred to in the HVAU.

To address the matter of compliance, ARTC will provide its views in relation to compliance with sections 4.2 and 4.3, and section 1.2, of the HVAU in the sections below.

6.1 HVAU Compliance

6.1.1 Floor and Ceiling Limits at sections 4.2 and 4.3

As noted previously, the nature of the floor and ceiling revenue limits and the attendant test of revenue for mines and combinations of mines have not significantly changed since the early 2000's under the NSW Rail Access Regime/NSWRAU and HVAU. The financial modelling provided by the track owner (ARTC and its predecessor) to IPART and the ACCC over this period has not significantly altered in nature or objective.

Over this period, the main aspects of the revenue limits and test that have changed, largely due to volume and cost changes, has been the set of mines forming the constrained group of mines and the constrained network. Specifically, due to changes in volumes:

- Mines on the Ulan line have become part of the constrained group of mines; and

- The Dartbrook mine no longer is part of the constrained group of mines.

In each compliance year since around 2000, the relevant track owner has submitted a compliance submission to either IPART or the ACCC and, following stakeholder consultation (and often some amendments), IPART or the ACCC has approved compliance with the NSW Rail Access Regime/NSWRAU or HVAU as applicable.

[44] Discussion Paper, Section 2.1, p9.

The financial modelling ARTC has provided to the ACCC as part of annual compliance assessment under the HVAU (and that provided previously to IPART) represents an accurate application of the Floor and Ceiling Limits and revenue test under the HVAU. As the application of the Floor and Ceiling Limits and revenue test under both the HVAU and NSWRAU (given effect by the financial modelling provided) has not substantially altered over the last 15 years, the nature of the financial modelling has also not substantially altered over this period. ACCC and IPART determination to accept compliance under the NSWRAU or HVAU over this period would have implied that the application of the revenue tests and financial modelling were also considered acceptable at the relevant time. The financial modelling used in annual compliance assessments is not substantially different to that provided to the ACCC during its assessment of the HVAU itself.

Until 2012, ARTC was not aware of any concerns being raised as to whether the nature of the financial modelling itself represented an accurate application of the Floor and Ceiling Limits and revenue test under the HVAU (or under the NSW Rail Access Regime/NSWRAU).

In each year's compliance submission under the HVAU (and in earlier years under the NSWRAU), ARTC provided detail publicly in relation to:

- the combination of mines that form the Constrained Group of Mines;
- the Segments that form the Constrained Network;
- Access revenue associated with the Constrained Group of Mines;
- the ceiling revenue limit for Segments forming the Constrained Network determined in accordance with the HVAU Pricing Principles, and including the detail of certain cost elements;
- a reconciliation of the ceiling test for the Constrained Group of Mines; and
- any resulting unders and overs amount arising from the reconciliation.

This detail represents an output of the confidential financial modelling provided as part of the submission in accordance with Schedule G of the HVAU (and earlier regulatory requirements as applicable).

Under the HVAU, this advice demonstrated that ARTC sought to recover Access revenue associated with the Constrained Group of Mines (being those mines operating Coal Trains that operated entirely within the Constrained Network) that met but did not exceed the Economic Cost of those Segments used by those Coal Trains, being the Constrained Network. Beyond this test of Access revenue against Economic Cost for the Constrained Network, the HVAU does not constrain access pricing or revenue allocation.

ARTC contends that this demonstration of the application of the Floor and Ceiling Revenue Limits and the test of Access revenue against Economic Cost for the Constrained Network provides a sufficient basis upon which the ACCC can make a determination as to whether ARTC has complied with sections 4.2 and 4.3 of the HVAU.

6.1.2 The intent of the HVAU at section 1.2(c)

In the 2012 Compliance Determination in relation to ARTC's compliance with the HVAU for 2012, the ACCC indicated that whilst it noted that the HVAU does not specify how revenue is to be allocated to particular pricing zones or segments for the purpose of compliance with the revenue cap, it also noted the objectives prescribed at section 1.2 of the HVAU including certain elements that describe the intent of the HVAU as indicated above. One of these elements was the use of transparent and detailed methodologies, principles and processes for determining Access revenue limits, terms and conditions at section 1.2(c)[45].

ARTC assumes from the ACCC's position in this regard that it considers this element as relevant to a consideration of how revenue is to be allocated to particular pricing zones or segments for the purpose of compliance with the revenue cap under the HVAU.

Further the ACCC, in the Discussion Paper, has indicated that the purpose of this review being 'to assess the level and adequacy of transparency of information provided to stakeholders on ARTC's current revenue allocation practices' reflects the objectives of the HVAU, specifically section 1.2(c) of the HVAU[46].

The Access revenue limits referred to at section 1.2 of the HVAU are prescribed at sections 4.2 and 4.3 as follows.

'4.2 Floor Revenue Limits

(a) Access revenue from every Access Holder must at least meet the Direct Cost imposed by that Access Holder.

(b) For each Segment or group of Segments, Access revenue from Access Holders should, as an objective, meet the Incremental Cost of those Segments ("Floor Limit").

4.3 Ceiling Revenue Limits

(a) In relation to Segments identified as forming part of Pricing Zone 1 and 2 in Schedule E, Access revenue from any Access Holder or group of Access Holders must not exceed the Economic Cost of those Segments which are required on a stand alone basis for the Access Holder or group of Access Holders ("Ceiling Limit").

(b) In relation to Segments identified as forming part of Pricing Zone 3 in Schedule E, the Access revenue from any Access Holder, or group of Access Holders must not exceed the Ceiling Limit where the RAB for those Segments is equal to, or falls below, the RAB Floor Limit for those Segments at the end of the calendar year (t -1).

(c) Access revenue for the purposes of this section 4.3 does not include Access revenue returned to a Contributor as a result of the operation of a user funding agreement between the Contributor and ARTC.'

[45] 2012 Compliance Determination, section 2.3.3.

[46] Discussion Paper, p5.

As such, binding Access revenue limits (as opposed to the pursuit of a revenue objective) are:

- A lower revenue limit of Direct Cost imposed by an any Access Holder; and
- An upper revenue limit of the Economic Cost of Segments utilised by any Access Holder or group of Access Holders on a stand-alone basis.

Direct Cost imposed by an Access Holder

In relation to the determination of the Direct Cost imposed by an Access Holder, the HVAU includes a transparent and detailed definition of Direct Cost being 'maintenance expenditure, including major periodic maintenance that varies with usage of the Network, and may include other costs that vary with the usage of the Network but excluding Depreciation, assessed on an Efficient basis'[47].

The HVAU also includes relevant pricing objectives at section 4.13 as follows:

'*In determining Charges, ARTC will have regard to separate cost elements as follows:*

> *(i) variable component of costs ("VCC") being Direct Costs;*
>
> *…*

In determining Charges, ARTC will have regard to the following objectives:

> *(i) achieving full recovery of VCC from all Access Holders on the basis of actual network usage;*
>
> *…*'

It should be clear that ARTC will set the non-TOP component of Charges in order to achieve recovery of the Direct Cost imposed by an Access Holder. ARTC has made it clear to Access Holders during the ACCC assessment of the HVAU and in subsequent pricing proposals[48] and compliance submissions, that the non-TOP component of Charges is intended to reflect Direct Cost (variable maintenance) and expressed on $/000GTK basis.

This intention and level of transparency in relation to this Access revenue limit has been confirmed by the ACCC in the Discussion Paper at Section 2.3 and Appendix A.

As a result, ARTC contends that Access Holders should be aware of the detail of the methodologies, principles and process for determining Direct Cost imposed by an Access Holder, and the basis upon which an Access Holder can determine this Access revenue limit (by applying the non-TOP component of Charges to the Access Holder's utilisation (GTK) for each part of the Access Holder's use of the Network.).

[47] HVAU, Section 14.1, Definitions, 'Direct Cost'.

[48] In each annual pricing submission provided to Access Holders under section 4.20 of the HVAU, ARTC has confirmed that the variable component of costs (VCC) being Direct Costs are sought to be recovered through the non-TOP component of the Indicative Access Charges.

In addition to the transparency and level of detail provided to Access Holders in relation to this Access revenue limit, ARTC has, in its applications in relation to the Initial Indicative Service[49] and Final Indicative Service[50], also provided substantial detail to Access Holders as to how the non-TOP component of Charges is differentiated to reflect the Direct Cost imposed by an Access Holder having regard to the characteristics of the Coal Trains utilised by that Access Holder.

ARTC therefore contends that the relevant provisions of the HVAU and ARTC' conduct in applying those provisions has been consistent with the intent of the HVAU as prescribed at section 1.2(c) in relation to the lower Access revenue limit.

Economic Cost of Segments utilised by any Access Holder or group of Access Holders on a stand-alone basis

In relation to the determination of the Economic Cost of Segments utilised by any Access Holder or group of Access Holders on a stand-alone basis Direct Cost imposed by an Access Holder, the HVAU includes a transparent and detailed basis for determining Economic Cost for a Segment at section 4.5 as follows (relevant parts only):

'*4.5 Economic cost*

(a) For the purposes of this section 4, Economic Cost of a Segment means:

> *(i) Segment Specific Costs;*
>
> *(ii) Depreciation of Segment Specific Assets, where the value of those assets is determined in accordance with section 4.4(b);*
>
> *(iii) a return on Segment Specific Assets, being determined by applying a real pre-tax Rate of Return to (RAB Floor Limitt-1 start + RAB Floor Limitt-1 end) * 0.5, where the value of the RAB Floor Limit is determined in accordance with section 4.4(b);*
>
> *(iv) an allocation of Non-Segment Specific Costs;*
>
> *(v) an allocation of depreciation of Non-Segment Specific Assets, determined on a straight line basis, by reference to a reasonable estimate of the economic useful life of Non-Segment Specific Assets, and determined from the time the assets become serviceable;*
>
> *(vi) an allocation of return on Non-Segment Specific Assets, being determined by applying a real pre-tax Rate of Return to the value of Non-Segment Specific Assets, from the time the assets become serviceable, where the value of those assets will include the capitalisation of interest cost incurred during construction up until the time the assets become serviceable, capitalised at that time and determined by reference to the relevant Rate of Return; and*

[49] ARTC, Revised Application to vary the 2011 HVAU to provide for the adoption of the Initial Indicative Service and Initial Indicative Access Charges in accordance with section 4.17(c)(ii), Supporting Document, September 2012.

[50] ARTC, Application to vary the 2011 HVAU to provide for the adoption of the Final Indicative Service and Charges in accordance with section 4.18(b), Supporting Document, January 2014.

(vii) the costs described in sub-sections (a)(i) to (vi) as applicable to Additional Capacity.

(b) All costs described in sub-sections (a)(i), (iv), (v) and (vi), all applicable costs described in sub-section (a)(vii), and all operating expenditure in section 4.4(a) are to be assessed on an Efficient basis.

(c) All costs are to be assessed on a stand alone basis.'

Section 4.6 of the HVAU also prescribes a transparent and detailed basis upon which cost allocation is to be carried out in order to determine Economic Cost for a Segment, as follows:

'*4.6 Cost allocation*

(a) For the purposes of section 4.5, Non-Segment Specific Costs and depreciation of, and return on, Non-Segment Specific Assets will be allocated to Segments in accordance with the following principles:

(i) where possible, costs will be directly attributed to a Segment;

(ii) where possible, Non-Segment Specific Costs and Non-Segment Specific Assets will be identified with the Hunter Valley corridor, other ARTC corridors or identified as system-wide;

(iii) Non-Segment Specific Costs and depreciation of, and return on, Non-Segment Specific Assets identified with the Hunter Valley corridor or other ARTC corridors, or identified as system-wide, will be allocated to those parts of Segments in the Hunter Valley corridor or in other ARTC corridors, or, where identified as system wide, to Segments owned, leased or licensed by ARTC respectively, in proportion to:

(A) gtkm with respect to Non-Segment Specific Costs and depreciation of, and return on, Non-Segment Specific Assets associated with track maintenance; and

(B) Train kilometres with respect to Non-Segment Specific Costs and depreciation of, and return on, Non-Segment Specific Assets not associated with track maintenance.

(b) All costs will comprise ARTC's reasonably anticipated costs over a reasonable future timeframe.'

Section 4.7 also prescribes a transparent and detailed methodology for determining Depreciation to be included in Economic Cost of a Segment.

Given the above, ARTC considers that this level of prescription for determining Economic Cost of a Segment in the HVAU itself provides a detailed methodology and principles for determining Economic Cost of a Segment and upper Access revenue limits that is transparent to Access Holders and provides a basis for the ACCC to assess compliance with the HVAU in this regard.

The combinatorial nature of the ceiling test under the HVAU implies that there will be a different upper Access revenue limit (Economic Cost) for each Access Holder or Group of Access Holders, depending on the Segments utilised. As indicated earlier in this submission there are large number of mine combinations that could be tested under the ceiling test but practical application derived from experience under the NSWRAU and HVAU identifies a smaller number of material combinations.

In its financial model supporting each year's compliance submission, ARTC provides substantial detail as to the determination of Economic Cost for each combination tested. This has previously been accepted as sufficient to enable the ACCC (or earlier IPART) to determine whether ARTC has complied with the relevant sections of the HVAU described above.

ARTC also provides a substantial level of detail in relation to the costs that have been included in relation to Economic Cost, and variations between years.

This process provides a basis for Access Holders to have confidence in the ACCC's determination that the upper Access revenue limit (Economic Cost) for each combination tested in the annual compliance assessment has been determined in accordance with the HVAU.

Given that the upper Access revenue limit (Economic Cost) only has direct implications on relevant Access Holders (through the application of unders and overs accounting) for the Constrained Group of Mines, ARTC considers that providing details as the determination of Economic Cost associated with Segments or all mine combinations tested is unnecessary and adds little to the compliance assessment process.

On the other hand, significant detail is provided in ARTC's compliance submission in relation to the determination of Economic Cost for the Constrained Network utilised by the Constrained Group of Mines that has direct implication for Constrained Customers, including:

- total Segment Specific Costs for Segments that form part of the Constrained Network;
- total Non-Segment Specific Costs (including Depreciation and return on Non-Segment Specific Assets) allocated to Segments forming part of the Constrained Network;
- total Depreciation on Segment Specific Assets for Segments that form part of the Constrained Network;
- total return on Segment Specific Assets for Segments that form part of the Constrained Network;
- total average RAB for Segment Specific assets for Segments that form part of the Constrained Network;
- detail as to specific costs included in each of the above categories and reasons for annual variation in costs.

In addition to the this level of detail in relation to the determination of the upper Access revenue limits (Economic Cost) provided publicly in each year's annual compliance submission, and to the ACCC in confidential financial modelling, ARTC also provides a similar level of detail to Access Holders in relation to the forecast Economic Cost of Segments forming part of each Pricing Segment in its pricing proposal to Access Holders in accordance with section 4.20 of the HVAU, upon which proposed Access Charges are based.

ARTC therefore contends that the relevant provisions of the HVAU and ARTC's conduct in applying those provisions has been consistent with the intent of the HVAU as prescribed at section 1.2(c) in relation to the upper Access revenue limit.

Achievement of the intent of the HVAU at section 1.2(c)

As demonstrated above, the HVAU itself, the existing processes undertaken by ARTC in order to comply with the HVAU and ARTC's general conduct under the HVAU, provide a level of transparency and detail to Access Holders and the ACCC in relation to the methodologies, principles and processes for determining Access revenue limits that is consistent with the intent of the HVAU in section 1.2(c).

ARTC has described the significant level of information provided to stakeholders on ARTC's current revenue allocation practices at section 5 of this submission. Nevertheless, it is not clear to ARTC how revenue allocation arising from the application of the floor and ceiling tests are relevant to the determination of Access revenue limits under the HVAU, which are based on a determination of the Direct Cost and the Economic Cost associated with use of the Network, nor to the achievement of the intent of the HVAU at section 1.2(c).

6.1.3 The intent of the HVAU at sections 1.2(d) and 1.2(e)

As indicated earlier in this section, further provisions that have been identified by the ACCC in the 2012 Compliance Determination (as indicated at section 4 to this submission) as relevant to a consideration of ARTC's compliance with the HVAU are:

- the intent of the HVAU prescribed at section 1.2 of the HVAU being, among other things,
    - reaching an appropriate balance between the legitimate business interests of ARTC, the interest of the public, and the interests of applicants seeking access rights to the network, including providing access in a transparent, efficient and non-discriminatory manner (clause 1.2(d)); and
    - operating consistently with the objectives and principles in Part IIIA of the CCA and the Competition Principles Agreement (clause 1.2(e)). The objects of Part IIIA include promoting the economically efficient operation of, use of, and investment in infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets.

'appropriate balance between legitimate business interests'

This objective of the HVAU was intended to provide a basis for ensuring that the HVAU, as a whole (or on balance), represented an appropriate balance between the legitimate business interests of ARTC, applicants and the public interest. It was not intended to ensure that every aspect of the HVAU represented an appropriate balance as such an objective would have been unreasonable and likely to be unachievable, as would be the case in most circumstances would two parties seek to negotiate an outcome. In such cases, an overall balance in the negotiated outcome is the objective.

Whilst most aspects of the HVAU were considered and resolved with the objective of achieving an appropriate balance of interests by the ACCC during its assessment, the HVAU approved by the ACCC resulted from a separate negotiation between ARTC and coal industry representatives. This outcome was accepted by the ACCC in its decision to approve the HVAU.

In achieving this negotiated outcome, it could be expected that certain aspects of the approved HVAU would, in either ARTC's or the coal industry's view, have not have represented an appropriate balance, but that the HVAU, in total, would have achieved that outcome.

'providing access in a transparent, efficient and non-discriminatory manner'

In the 2012 Compliance Determination, the ACCC seems to have highlighted this particular element prescribed in the HVAU as a legitimate business interest of an applicant. Section 1.2 of the HVAU prescribes several explicit elements in relation to the legitimate business interests of ARTC, applicants and the public for consideration in determining whether the HVAU achieves its overall objectives.

It could be argued that a review of one of the provisions of the HVAU in the context of only one element of the HVAU objectives may be narrow in perspective, and possibly inconsistent with the HVAU objective, which seeks broader considerations.

Nevertheless, ARTC has sought to address the ACCC's questions in this review around transparency and efficiency at sections 5 and 7 of this submission respectively.

ARTC has also identified at section 4.2 of this submission a range of provisions introduced in the HVAU that, in its view, results in an overall balanced outcome, and results in a regulatory environment that substantially enhances the level of transparency to users and improves the framework for delivering efficient outcomes compared to that provided under the NSWRAU.

'promoting the economically efficient operation of, use of, and investment in infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets'

ARTC has sought to address the ACCC questions in this review relating to efficient use of, and investment in, infrastructure and effective competition in markets at section 7 of this submission.

As mentioned above, ARTC has also identified at section 4.2 of this submission a range of provisions introduced in the HVAU that results in an overall balanced outcome, and a regulatory environment that substantially improves the framework for delivering efficient outcomes compared to that provided under the NSWRAU.

7 EFFICIENCY OF PRICING AND INVESTMENT INCENTIVES

The purpose of this section is to evaluate the efficiency of the current arrangements under the HVAU, which is considered relevant to the ACCC's revenue allocation review. If any future change to the current arrangements is contemplated, it is important that the ACCC demonstrates why the existing arrangements are inefficient and how and why any proposed change would improve efficiency, while maintaining the balance of interests between parties as achieved in negotiating the HVAU.

This section will consider the primary regulatory objectives and pricing principles and how they are generally applied in third party access regimes in Australia, before showing how ARTC's approach is efficient, having regard to the requirements of its governing legislation and the HVAU.

7.1 Objectives of the Access Regime

The starting point for such a review needs to be the objectives of ARTC's access regime, including the HVAU Pricing Principles. This should serve as the criteria that are used to assess the efficiency and effectiveness of the current approach.

7.1.1 Competition and Consumer Act 2010

The overarching objective of third party access is contained in the Objects of Part IIIA of the Competition and Consumer Act 2010 (**CCA**), which is to:[51]

> *…promote the economically efficient operation of, use of and investment in the infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets…*

Reference should also be made to the Pricing Principles in clause 44ZZCA, which are:

> *(a) that regulated access prices should:*
>
> *(i) be set so as to generate expected revenue for a regulated service or services that is at least sufficient to meet the efficient costs of providing access to the regulated service or services; and*
>
> *(ii) include a return on investment commensurate with the regulatory and commercial risks involved; and*
>
> *(b) that the access price structures should:*

[51] Cl. 44AA(a) of the CCA.

(i) allow multi-part pricing and price discrimination when it aids efficiency; and

(ii) not allow a vertically integrated access provider to set terms and conditions that discriminate In favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher; and

(c) that access pricing regimes should provide incentives to reduce costs or otherwise improve productivity.

These principles are consistent with the *Competition Principles Agreement* and accordingly are common to most third party access regimes in Australia.

7.1.2 The role of prices in achieving efficiency

Revenue allocation has to be considered within the context of the HVAU Pricing Principles. Revenue allocation is an outcome of the HVAU Pricing Principles, not a separate issue.

It is therefore important to understand the role that access pricing (and resulting revenue recovery) plays in promoting the Objects Clause and achieving the Pricing Principles in the CCA. The notion of 'efficiency' is explored here. The application of the Pricing Principles in the CCA is considered in the next section.

Economic efficiency

Economic efficiency is typically considered as having three components, being:

Productive efficiency: goods and services are produced at the lowest possible cost.

Allocative efficiency: resources are allocated to their most productive use (or those activities that are most highly valued by consumers).

Dynamic efficiency: this has longer term focus and is about ensuring resources are allocated to enable efficient improvements (that is, benefits exceed costs) in technology and productive capacity.

These efficiency objectives underpin key Pricing Principles in the CCA. For example, ensuring that access prices reflect the efficient costs of delivering access (including an appropriate return on capital) contributes towards the competitiveness of the supply chain of which that network is a part, resulting in lower prices for consumers (recognising that access prices may only comprise a relatively small part of the total delivered cost of the relevant good or service). Monopoly pricing can also reduce allocative efficiency by restricting access to the network and therefore reducing output.

Key to ensuring dynamic efficiency is that efficient network investment occurs at the right time, at the right place and in the right sequence. This is fundamental to the promotion of the Objects Clause and is considered further below.

Incentivising efficient network utilisation and investment

In the first instance it is essential that the access framework, including prices, maximises the efficient utilisation of the existing network infrastructure. There could be a least cost, more efficient solution that would increase throughput on the existing network and thereby avoiding, or delaying, a more costly network augmentation. This can also be achieved with capital investment. That is, rather than simply investing in more track, investments might be targeted at improving cycle times or accommodating longer trains or heavier axle loads (as has been the case with some of ARTC's more recent network investments, as described later in this chapter).

Investment in rail network infrastructure is inherently lumpy in nature. Recognising the long lead times for investment, it may need to be made in anticipation of future growth in volume. Investments in established parts of a network that primarily create capacity for growth in developing parts of the network are evaluated over a longer horizon to reflect the ability of growing markets to contribute. Growth volumes achieved in the medium to long term result in a longer term contribution by those users with commensurate benefits for established markets in that time frame (through a broader sharing of fixed costs). In ARTC's case where investments must be endorsed by users, this would be expected to be factored into the endorsement decisions by established users.

Once the investment is made, the assets become 'sunk' (as there is limited or no alternative use for the asset) and tend to have a long capital recovery profile. Accordingly, the risks underpinning investment network infrastructure are high. In order for investment to be able to occur in the right place, at the right time and in the right sequence, there needs to be sufficient incentive for the network owner to invest, including having sufficient confidence that it will be able to recover a full return on, and of, the capital that has been committed, as it is permitted to do under the CCA.

The detrimental impact that regulation can have on infrastructure investment was recognised in the Productivity Commission's first review of the National Access Regime in 2001.52 This was again acknowledged in the most recent review, where it identified the following factors that could discourage investment:[53]

- asymmetric truncation, which is "where regulation is expected to expropriate above normal returns but not compensate for below normal returns"[54]; and

- regulatory risk associated with access regulation, including uncertainty regarding future access obligations.

It also recognised that access regulation can have a detrimental impact on the willingness of users to invest in their own infrastructure.

[52] Productivity Commission (2001). Review of the National Access Regime, Productivity Commission Inquiry Report, No. 17, 28 September.

[53] Productivity Commission (2013). National Access Regime, Productivity Commission Inquiry Report, No.66, 25 October. pp.100-103.

[54] Productivity Commission (2013). p.100.

The above considerations are fundamental to ARTC's concerns with the ACCC's current review. ARTC cannot be expected to commit to major network investments if it is uncertain as to whether it will be able to recover sufficient revenue to recover its capital, including a reasonable return on that investment. Such decisions are made on the assumption that the current HVAU Pricing Principles (and resulting revenue allocation) will continue to apply. The risk of future changes to the regulatory framework introduces considerable uncertainty and undermines ARTC's incentives to invest.

With this overarching issue in mind, the next section will examine how the Pricing Principles in the CCA set out above are reflected in access regimes.

7.2 Key features of access pricing frameworks

Having regard to the CCA principles, there are a number of core features of third party access regimes that are generally observed across jurisdictions. However, they can be implemented and managed in different ways, recognising the different environment and circumstances present in each regime. These include differences in:

- the history of each regime, including Government policy imperatives that may have underpinned declaration as well as the development and evolution of the regime itself (for example, encouraging the growth and development of key industries such as export coal);

- differences in the scope and geography of the network (for example, the contrast between ARTC's Hunter Valley coal network and the multi-system Central Queensland Coal Network);

- differences in the user base (including capacity to pay) and industry development profile; and

- differences in traffic types and interactions on different parts of the network.

With these differences in mind, these core features are described below.

7.2.1 Floor and ceiling limits

Pricing principle

Access charges are typically set such that resulting revenue lies between a floor and ceiling, where:

- the floor reflects the incremental costs of providing access (or, the costs that would be avoided if that access was not provided), to prevent cross-subsidies between users; and

- the ceiling reflects the stand-alone (or full economic) cost of providing access, including operating and capital.

This reflects the principle that the access provider should be entitled to at least recover its efficient costs or providing access, including a return on capital that is

commensurate with the risks involved. The concept of a ceiling based on stand-alone cost recognises that if prices are set above this amount, it could induce inefficient network bypass, which reduces productive efficiency.

The floor-ceiling approach, also referred to as 'constrained market pricing' in the US, is commonly applied in rail access regimes. There are a number of approaches that have been considered for pricing access to rail network infrastructure, which has a key characteristic of requiring the allocation of joint or common costs across users.

This approach has some relationship with the concept of Ramsey pricing. Ramsey pricing, sometimes known as 'second best pricing' (relative to marginal cost pricing), involves charging users an incremental price above marginal cost which is inverse to their price responsiveness (elasticity). That is, those users who are more price-sensitive are charged less than those who are less price-sensitive. In this way, unattributable fixed costs can be fully allocated to customers according to their willingness to pay, thereby minimising the distortion to consumption and output which would occur under average cost pricing.

In practice a Ramsey pricing model can be difficult to implement. The informational requirements, such as knowledge of each customer's willingness to pay, can be costly and impractical to obtain. In 2006, the Productivity Commission (PC) concluded that the implementation of Ramsey pricing principles, to the extent possible, has the potential to promote efficient use of rail freight infrastructure while ensuring complete economic cost recovery:[55]

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

Further, although information requirements and other challenges may result in a 'rough and ready' manner of implementation in practice, the PC notes that Ramsey pricing is still likely to lead to more efficient outcomes relative to other allocation methods.

One principle that is used in pricing access to rail networks that has some relationship with this concept – although it is based on capacity to pay rather than willingness to pay – is the distance taper:[56]

> *The distance taper assumes that all other things being equal, a mine with a shorter haul distance has a greater capacity to pay than a mine with a longer haul distance and is therefore able to make a higher contribution to common costs.*

The distance taper is inherent in Aurizon Network's access pricing regime as a way of allocating fixed costs. As noted by the Queensland Competition Authority:[57]

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[55] Productivity Commission. (2006). Road and Rail Freight Infrastructure Pricing. Available from: http://www.pc.gov.au/__data/assets/pdf_file/0003/47532/freight.pdf [Accessed 3 July 2014]. p.58

[56] Aurizon Network (2013). 2013 Draft Access Undertaking, Volume 2: the 2013 Undertaking Proposal, p.222.

> *This structure was originally approved on state development grounds as it tended to provide an incentive for the development of newer mines that were more distant from the export terminals.*

It is noted that this principle remains an inherent feature of Aurizon Network's access pricing regime, despite the Central Queensland Coal Network having experienced significant growth since the regime was originally approved (and all parts of the established network are now likely to be constrained or capable of paying the ceiling price). While applied in a different way, this principle is consistent with ARTC's treatment of revenue allocation between the constrained and unconstrained pricing zones. Indeed it has also underpinned the historical development of pricing zones 1 and 2.

Another pricing option that has previously been considered is fully distributed cost (FDC). This involves setting prices to allocate common costs based on some measure of activity. For example, in the case of rail, this could result in an approach where costs are allocated on a line section by line section basis. This approach was considered in the development of the NSWRAU. In its report to the National Competition Council on the pricing principles to apply to the NSWRAU, KPMG observed that:[58]

> *FDC seems to provide a 'fair' mechanism to distribute joint or common costs. Customers of a monopolist will invariably favour forms of FDC pricing because these prices are perceived as equitable – each user must be charged the same relative price. However, from an efficiency perspective, such pricing can be potentially damaging because it fails to take account of demand conditions. The criteria used to distribute common costs are arbitrary, and not related to the achievement of economic efficiency.*

This approach was not adopted in favour of the floor and ceiling approach. This was further validated when the NSWRAU was certified by the National Competition Council:[59]

> *The pricing principles are a key negotiation parameter, provide for a ceiling and floor but for negotiation of the access price within these limits. Although some access seekers may prefer a more transparent pricing approach, I am satisfied, on the basis of the NCC's inquiries, that the framework is theoretically sound and practicable. These considerations, in conjunction with the information rights afforded by the Regime to access seekers, provide for an effective price negotiation framework.*

The implication of the floor and ceiling limits is that network owners have some flexibility as to where they set prices within these limits, including price discrimination between different users or classes or users (provided this is efficient), with a view to ensuring they can maximise utilisation of the network and

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[57] Queensland Competition Authority (2009). Draft Decision, QR Network 2009 Draft Access Undertaking, December, p.158.

[58] KPMG (1997). Report for the NCC, The pricing principles contained in the NSW Rail Access Regime, September, p.31.

[59] Minister for Financial Services and Regulation, Statement of Reasons, http://ncc.gov.au/images/uploads/CERaNsDe-001.pdf. [Accessed 4 July 2014] p.3.

recover their fixed costs. This in turn is consistent with Ramsey pricing. The principle of price discrimination is examined in the next section.

Application in the NSWRAU and HVAU

As discussed in section 4 of this submission, a floor and ceiling test was a key feature of the NSWRAU and has also been carried through to the HVAU.

Application in other regimes

Aurizon Network

Pricing limits apply in Aurizon Network's 2010 Access Undertaking (section 6.2). For an individual train service, access charges must not:

- fall below the expected incremental cost of providing access to that train service; or
- exceed the level that would recover the expected stand alone cost of providing access to that train service.

Further, these pricing limits apply to combinations of train services that incorporate that train service, based on the costs of providing access to that combination of train services.

WA's Railway Access Code

In broad terms, the *Railways (Access) Code 2000* provides for:[60]

- a floor price test, which requires that an individual operator (or all operators including the owner) provided with access to a route does not pay less than the incremental costs resulting from the individual or combined operations on that route; and
- a ceiling price test, which requires that an individual operator (or all operators including the owner) provided with access to a route will not pay more than the total costs attributable to that route.

SA's Railway Access Code

The *AustralAsia Railway (Third Party Access) Code* provides that parties are free to negotiate between floor and ceiling prices, where the floor reflects avoidable costs and the ceiling reflects stand alone cost, where access pricing at or above the ceiling would extract monopoly rents.

Victoria's Rail Access Pricing Guideline

This Pricing Guideline applies to Victoria's light-handed rail access regime. For terminals, charges for each service must be priced so that revenue:[61]

[60] Railways Access Code (2000), Schedule 4, clauses 7 and 8.

[61] Essential Services Commission (2009). Rail Access Pricing Guideline, v.2.0, June, p.5.

a) at least covers the directly attributable or incremental costs of providing the service;

(b) does not recover more than the stand alone costs of providing that service.

These principles also apply to freight non-reference services.

Other regimes

The floor and ceiling approach is also applied in other regimes.

For example, the Utility Regulator's Forum recognised that in order for prices to be economically efficient, they must lie within the bounds of:[62]

- avoidable cost, which reflect the direct costs incurred by the supplier in providing the service; and
- stand alone cost, which should be equivalent to the prices charged by a viable new entrant.

The National Water Initiative's pricing principles for setting urban water tariffs provides that:[63]

> *The service availability charge could vary between customers or customer classes, depending on service demands and equity considerations. Unattributable joint costs should be allocated such that total charges to a customer must not exceed stand-alone cost or be less than avoidable cost where it is practicable to do so.*

Overall, while the tests may be applied in different ways between regimes, the requirement that prices are set between floor and ceiling limits is not controversial.

7.2.2 Price discrimination

Pricing principle

As cited above, one of the Pricing Principles in the CCA is that access price structures should allow price discrimination where it aids efficiency. This is enabled by the application of the floor and ceiling approach. One of the most economically efficient forms of price discrimination is based on willingness to pay (Ramsey pricing), recognising the difficulties in implementing this fully in practice.

Where the access provider has market power it may be necessary to impose some constraints on its ability to price discriminate if it results in outcomes that are inefficient, for example, being able to charge a differential price to a related operator for the specific purpose of distorting competition in the above-rail

[62] Utility Regulators Forum (2005). Review of Nationally Consistent Pricing Principles, Discussion Paper.

[63] Steering Group on Water Charges (2010). National Water Initiative Pricing Principles, p.10.

market. However, it should not prevent a network owner from engaging in legitimate and efficient price discrimination.

In a review of the constraints on price discrimination in the US rail industry, Brennan argues that such a focus is 'predictable' given shippers are less likely to be concerned with absolute prices (which can usually be passed onto consumers) but more about relative prices compared to competitors:[64]

> *For this reason, the ability to compete for input discounts provides important downward pricing pressure on final products. Risk and competition-averse firms will thus have much more interest in preventing anyone from getting a discount. This implies that legislators and regulators will be pressured to ensure that prices are not discriminatory, so that no one is able to get an advantage. The ICA is compellingly consistent with this explanation, as it is dominated almost exclusively by provision after provision that is devoted to preventing discrimination. Were consumer welfare the object, or were consumers a party with political clout, one would have seen that level of attention in the ICA devoted to considering what a "just and reasonable" rate level, as opposed to rate structure, should be.*

The PC commented on this in its 2006 review of road and rail pricing, observing:[65]

> *While access regimes do not explicitly preclude rail infrastructure providers from allocating proportionately more common costs to less price-sensitive users, it is not clear that the benefits of such pricing are adequately reflected in the approach of regulators. Concern that price discrimination could distort downstream markets in some instances should not be a reason for precluding or discouraging it where it has the potential to lead to more efficient outcomes (and, importantly, enable additional revenue to be obtained to allow the ongoing provision of a service).*

Where constraints on price discrimination is likely to be more important is where the access provider is vertically integrated, as it could price discriminate in favour of its related operator and hence distort competition in the above-rail market.

Application in the NSWRAU and HVAU

Other than the requirement to satisfy the ceiling and floor test with respect to access revenue, the NSWRAU does not prescribe any further limits on access pricing that can be charged by the track owner[66]. This principle also applies under the HVAU.

[64] Brennan, T. (2013). Mitigating Monopoly or Preventing Discrimination: Comparing Antitrust to Regulatory Goals in the Interstate Commerce Act. Review of Industrial Organization, August 2013, Volume 43, Issue 1-2, p.33.

[65] Productivity Commission (2006). p.144.

[66] Noting that origin-destination based coal pricing was required under earlier versions of the NSW Rail Access Regime (circa 2000)

Application in other regimes

Aurizon Network

As a vertically integrated access provider there can be expected to be some constraints on price discrimination in its access regime. Clause 6.1.2 in the 2010 Access Undertaking enables price differentiation based on cost or risk differences in providing access to a train service (compared to the Reference Train Service).

The main current example of price differentiation is the capacity multiplier, which is intended to reflect the costs of a train service that consumes more network capacity relative to the reference train service. Given this was originally intended to be applied further, as part of its fourth access undertaking review Aurizon Network has sought to clarify the ability of parties to contract on non-standard terms and the implications of this for pricing if it results in cost or risk differences.[67]

WA Railways Access Code

Clause 13(a) in Schedule 4 of the *Railways (Access) Code 2000* requires "consistency in the application of pricing principles", which is interpreted as meaning that any price differences are limited to cost or risk differences (clause 13(b)).

SA's Railway Access Code

There are no explicit constraints on price discrimination under the *AustralAsia Railway (Third Party Access) Code*. Further, while this Code contains pricing principles:[68]

> *The pricing principles do not prevent an access provider from entering into an access contract on terms that do not reflect the pricing principles.*

The pricing principles, which are intended to guide an arbitrator in the event of a dispute, refer to the concept of a "competitive rail linehaul price" in assessing the maximum competitive price that the railway owner could charge. Such a price could be the existing freight rates charged to other services hauling the same or similar freight, having regard to differences in:

- the type and volume of freight product;
- cost or service characteristics;
- contractual terms;
- the time when access is required (and the capacity to accommodate other freight and passenger services at the same time); and
- the amount of freight and prices charged in each direction.

[67] Aurizon Network (2013). 2013 Draft Access Undertaking, Volume 2: the 2013 Undertaking Proposal, refer section 9.5.

[68] Cl.24.

Victoria's Rail Access Pricing Guideline

Overall, the pricing principles in the *Rail Network Pricing Order 2005*:

- permit price differentiation where it aids efficiency; and
- prohibit differential pricing between a related party and a third party access seeker where the nature of the services are the same.

The Pricing Guideline provides that:[69]

> *Access providers may price differentiate between broad freight types where the Commission is satisfied that this would enhance economic efficiency, and would be fair and reasonable having regard to the significance of the expected improvement in network utilisation and the impact on users.*

7.2.3 Revenue allocation

Pricing principle

As noted above, because revenue allocation is an outcome of the HVAU Pricing Principles rather than a separate issue, separate revenue allocation principles are typically not specified.

Application in the NSWRAU and HVAU

ARTC's approach to revenue allocation is explained in section 4.

Application in other Regimes

Aurizon Network

Under Clause 6.3.2, provided Aurizon Network does not contravene the requirements in relation to price differentiation (discussed above) and complies with its obligations in relation to price limits (i.e. the floor and ceiling), then it will:

> *…be entitled to earn revenue from the provision of Access, including both Access Charges and Transport Service Payments, that is sufficient to achieve full recovery of Efficient Costs … including a rate of return on the value of assets commensurate with the regulatory and commercial risks involved.*

WA Railway Access Code

The *Railways (Access) Code 2000* does not contain any provisions specifically governing how revenue will be allocated. However, reference can be made to the Part 5 instruments that have been established and approved pursuant to this Code, especially the overpayment rules. The approved overpayment rules applies the following rules to the allocation of revenue:[70]

[69] Essential Services Commission (2009). Rail Access Pricing Guideline v.2.0, p.23.

[70] WestNet Rail (2011). Overpayment Rules, Approved April 2011. The Pilbara Infrastructure (2013). Railways (Access) Code 2000 Overpayment Rules, March.

1. Access revenue from a route can only be allocated to the route sections on that route.

2. Access revenue will be attributed to applicable route sections in the following order:

    a. Incremental costs on all applicable route sections;

    b. Up to the Ceiling on all applicable branch or feeder (dedicated) route sections; and

    c. Up to the Ceiling on all applicable shared route sections.

This hierarchy reflects capacity to pay and is consistent with the approach in the Hunter Valley as PZ3 can be considered equivalent to a dedicated route section.

SA's Railway Access Code

There are no provisions in the *AustralAsia Railway (Third Party Access) Code* dealing with revenue allocation.

Victoria's Rail Access Pricing Guideline

The *Rail Network Pricing Order 2005* requires that across all declared services, expected revenue should be equal to the service provider's efficient costs of providing those services.[71] There are no provisions dealing with revenue allocation.

The ESC's Rail Access Pricing Guideline has some specific requirements in relation to the over-recovery of revenue under the revenue cap, however this only relates to if and how an adjustment is made to the revenue cap in the following access arrangement period and how this is treated between different traffic types (i.e. grain, general and bulk freight).[72]

7.2.4 Conclusion

This section has explored some of the key pricing principles that underpin rail access pricing, which have emanated from the overarching objectives outlined in section 7.1, including the universal objective of maximising the efficient utilisation of, and investment in, the network infrastructure. These principles generally feature in Australian rail access regimes although there are differences in how they are implemented, having regard to the historical development of each regime, government policy imperatives and other environmental factors.

It is also evident that most regimes tend not to prescribe how revenue should be allocated. This in turn reflects the recognition that there is a need for flexibility as to how fixed costs are recovered provided the service provider remains within the floor and ceiling limits.

[71] Cl.4.1(a)

[72] Essential Services Commission (2009). pp.12-13.

The implications of this for ARTC's approach are explored below.

7.3 Implications for ARTC's approach

7.3.1 Assessing efficient pricing combinations within floor and ceiling limits

As noted in earlier sections of this submission, for a network with multiple origins (mines) and destinations (terminals), such as the Hunter Valley coal network, there is a number of different pricing outcomes between those mines that will satisfy the floor and ceiling test. Regard can then be given to other factors, based on the HVAU Pricing Principles, in assessing which pricing strategy might be optimal.

ARTC has illustrated this in two case studies (refer section 4 of this submission). These scenarios applied the combinatorial ceiling test for a small network of two mines and a port, where:

- both mines are constrained (Case Study 1)
- one mine is constrained and one is unconstrained (Case Study 2).

The most relevant scenario is the second one, as a combination of constrained and unconstrained zones reflects the current and historical situation in the Hunter Valley coal network.

This analysis showed that a number of different pricing combinations satisfy the floor and ceiling test. It then becomes a question of identifying the combination that produces the most efficient outcome. This in turn needs to have regard to the overarching objective of the regime and the HVAU Pricing Principles.

As discussed above, investment in network infrastructure tends to have a long economic life and hence a long capital recovery period. Over that time, the structure of the industry will continue to develop and evolve (and perhaps even contract), as will the users of the infrastructure.

Historically, it has been important to encourage the growth and development of the Hunter Valley. This has remained a policy imperative for the New South Wales Government when it intervened in the development of the long term solution in the Hunter Valley coal supply chain, where it required that it "contain a mechanism that catered more expressly for new entrants to the Hunter Valley to access export capacity."[73]

Some investments are more discrete and may clearly benefit a specific group of users. However, more commonly, for investments in shared network infrastructure it can be practically difficult to delineate between 'beneficiaries' or 'non-beneficiaries' when the investment is made, let alone over the life of that investment. For example, existing users may consider that they do not benefit from

[73] Australian Competition and Consumer Commission (2009). Determination, Applications for Authorisation Lodged by Port Waratah Coal Services Limited and Newcastle Infrastructure Group Pty Ltd, 13 May, p.15.

an expansion if they are not looking to expand their contracted capacity, however they could still benefit in a number of ways, for example, by enabling them to run more ad hoc services, reducing maintenance expenditure and/or reducing congestion and improving service quality (examples of such investments on the Hunter Valley coal network are explored below).

Forcing any such distinctions between users of the same network infrastructure can therefore be misleading. It will become particularly irrelevant over the life of that investment, including as other new users enter the network. Over the life of an investment, different users will make different contributions towards the costs of that investment, as their willingness and/or capacity to pay changes. PZ3 users will eventually make a higher contribution to common costs as that network becomes constrained. This is the approach that has underpinned the development of the Hunter Valley coal network.

These complexities highlight the importance of retaining flexibility in how revenue is allocated, provided:

- the floor and ceiling tests are satisfied; and
- the resulting allocation is not inefficient.

Imposing a more prescriptive approach that is designed to achieve a certain outcome at a particular point in time could have adverse consequences longer term, recognising that decisions need to be made in the context of the investment lifecycle. This includes assessing the ability of growing markets to contribute. Growth volumes achieved in the medium to long term will see a greater contribution by those users, with commensurate benefits to existing users as average costs decline (as fixed network costs are shared over a broader user base). As will be explored further below, investments in the Hunter Valley coal network must be endorsed by users via the Rail Capacity Group (RCG) and it would be expected that these considerations factor into this decision making.

At the same time, what will happen over that lifecycle cannot be predicted with any certainty, including whether there will be adequate demand to fully recover the return on, and return of, the capital invested. The risk of asset stranding is a primary consideration for the asset owner and as outlined above, has a significant impact on its investment incentives.

While ARTC's loss capitalisation approach is an important mechanism for recognising losses that might be made early in the life cycle of a network, deferring recovery of a substantial proportion of its fixed network costs using this mechanism does not mitigate its stranding risk as ARTC still needs to be able to eventually recover those capitalised losses via access charges.

In any case, loss capitalisation only applies in unconstrained zones. Accordingly, this mechanism could only be used if those investment costs could be solely attributed to uses in that unconstrained zone. As shown above, the investments made have had wider supply chain benefits.

The balance of this section will examine the efficiency of network investments that ARTC has made and the efficiency of its revenue allocation approach in this context.

7.3.2 Investment efficiency

The ACCC has noted the increase in coal volumes in the Hunter Valley that has necessitated investment in the network (discussed in section 3 above). It has noted that several projects have been undertaken to create additional capacity in PZ1, observing that:[74]

> *These capital projects are likely to become more significant given that traffic traversing the network in PZ1 is forecast to increase significantly in coming years and significant investments in PZ1 are required to accommodate the increased traffic from PZ3 producers.*

The approach to revenue recovery for these investments is as follows:

- because PZ3 journeys are currently unconstrained, no revenue from PZ3 mines would be allocated to PZ1 (other than to recover Direct Cost);
- as a result, no revenue would currently be allocated from PZ3 to pay for investments in PZ1;
- as volumes from PZ3 mines grew to take up the capacity resulting from the investment, PZ3 journeys would become constrained and would then make a contribution to fixed cost in PZ1, including investment costs; and
- all other input being equal, this would reduce prices for PZ1 journeys, now sharing PZ1 costs over a broader volume base.

Based on discussions with the ACCC it is evident that it is concerned as to whether this is appropriate, that is, it is appropriate that no revenue from PZ3 mines (above what is necessary to recover Direct Costs) is being allocated to contribute towards the costs of these investments made in PZ1. It has also questioned whether PZ1 producers would have been aware of this when deciding whether to endorse these investments as part of the RCG process.

ARTC is unable to confirm what factors producers contemplate during the RCG decision making process. However, based on the above information provided by ARTC to inform stakeholders during the ACCC's assessment of the HVAU, ARTC considers it reasonable to assume that producers should be aware of the revenue recovery approach outlined above.

It is also important to note that as voting rights in each pricing zone are based on GTKs, it could be expected that PZ1 and PZ2 producers would substantially control the endorsement of investments in PZ1. Without the support of PZ1 and PZ2 producers, the investments in PZ1 could not have been endorsed by the RCG and investment to accommodate growth in the Gunnedah Basin could only occur in PZ3.

It is therefore likely that PZ1 and PZ2 users recognised the wider benefits of the PZ1 expansions (in both the short and longer term) in addressing capacity constraints and accommodating future growth for all users. As stated above,

[74] Discussion Paper, p.6.

where PZ3 volumes increase to the point where the capacity of these users to pay is more aligned with PZ1 and PZ2 users, PZ3 users will make a greater contribution towards the cost of these shared network investments – this is the same situation that has occurred with the growth and development of PZ2. Indeed, if PZ1 and/or PZ2 producers become the marginal users in the longer term, the PZ3 users will be the dominant contributors towards the costs of investments.

There has been significant investment already in the Gunnedah Basin (and more is planned to occur in the near future) that is intended to reduce operating costs for PZ3 users by enabling the operation of longer heavier trains. This will also provide benefits for PZ1 and PZ2 users by increasing capacity in PZ1, as the operation of fewer longer, heavier trains alleviates capacity constraints.

This similarly occurred in PZ2 historically where investments including loop lengthening and construction to accommodate longer and more reliable operations were undertaken in anticipation of future growth. The circumstances prevailing at the time were similar to those currently existing in the Gunnedah Basin, that is, PZ2 users were in a development and growth phase and the investments made resulted in wider supply chain benefits.

7.4 Summary: why ARTC's revenue allocation approach is efficient

As outlined above, the efficiency of ARTC's revenue allocation approach needs to be evaluated over the long term, commensurate with the horizon of network investments. Whilst always ensuring that it remains within the floor and ceiling limits, the essence of ARTC's approach is price differentiation between constrained and unconstrained zones, whereby users in the constrained zones make a higher contribution to common costs in the constrained zones than users in the unconstrained zones. Once an unconstrained zone becomes constrained, the contribution to common costs made by those users will increase.

ARTC considers that this is an efficient form of price discrimination, as permitted under the CCA. This is because it is driven by differences in capacity to pay. This is consistent with the principle of Ramsey pricing (given the relationship between willingness to pay and capacity to pay), which has been acknowledged as an efficient infrastructure pricing approach. This is also exhibited by the distance taper principle, which results in the contribution to common costs declining as distance increases.

Due to the nature of the Hunter Valley network, investments occur in specific parts of the network that will have flow on benefits for all users of the Hunter Valley coal chain. The benefits are therefore socialised in many cases, whereas recovery of the cost of those investments is not. ARTC would expect that in the long run, the costs and benefits will balance out so that all coal users will pay a fair share for Hunter Valley network investment as and when they can.

Retaining sufficient flexibility to allocate revenue based on capacity to pay reduces the risk that ARTC is unable to recover a full return of, and return on, capital over the long economic lives of its network assets. Under the Pricing Principles in the CCA, ARTC is entitled to recover the full economic costs of the investment it makes, including a return on capital. As outlined above, reliance on the loss capitalisation

mechanism only shifts this problem to some point in the future and increases ARTC's stranding risk.

ARTC does not believe that this approach has a detrimental impact on competition in the above-rail market, nor does it distort competition in the end product market in the long run. Instead, it encourages entry and hence the growth and development of new coal basins, which is in the broader public interest as it will maximise the economic value of the State's coal resources. This has historically been a priority of the New South Wales Government and there is no information to suggest that this priority may have changed.

Ensuring that ARTC can recover its efficient investment costs is not only in its legitimate business interests, but also incentivises efficient and timely network investment, consistent with the Objects Clause.

This approach maintains the incentive for ARTC to make investments at the right time, in the right place and in the right sequence, whether those investments create new network capacity or facilitate operational improvements that increase the utilisation of the existing infrastructure. Importantly, these investments are endorsed by Hunter Valley producers via the RCG.

Any change in approach could fundamentally alter the current incentives for efficient investment and network utilisation. This is discussed further in the next section.

8 EQUITY CONSIDERATIONS

The ACCC's Discussion Paper infers that the current revenue allocation arrangements might not be equitable. This section will show that they are equitable, if a long-term, whole of system view is taken. It will do this having regard to actual growth in Hunter Valley coal network volumes, the investment made to accommodate those volumes, and the consequent contribution to these costs. Drawing conclusions based on a snap-shot (one-year) view is misleading, and could result in changes being made that will actually result in inefficient and inequitable outcomes for users.

As indicated at section 3.1 of this submission, statements made by the ACCC in the Discussion Paper, and the 2012 Compliance Determination, would indicate that the ACCC may be seeking stakeholder's views in relation to the revenue allocation approach and whether it results in equitable and non-discriminatory outcomes for PZ1 and PZ2 producers compared to PZ3 producers.

At Section 1.1.2 of the Discussion Paper, the ACCC has highlighted recent investment in capacity enhancing projects that are intended to accommodate future growth in the Hunter Valley coal network, including anticipated growth in volumes from the Gunnedah Basin. At Sections 2.2 and 2.3 of the Discussion Paper, the ACCC has indicated that in 2012 the existing approach to revenue allocation results in PZ3 producers not making any contribution to fixed cost in PZ1, which is recovered from PZ1 and PZ2 producers. It would then follow that, in 2012, PZ3 producers made no contribution towards recovery of the cost associated with the recent PZ1 investments despite such investments being undertaken in part to provide capacity for growth in volumes in the Gunnedah Basin.

In drawing the attention of stakeholders to these aspects, the ACCC would seem to be seeking stakeholder views in relation to whether such an outcome may be equitable between PZ1 and PZ2 producers, and PZ3 producers. Based on discussions with the ACCC it is evident that it is concerned as to whether this is appropriate, that is, is it appropriate that no revenue from PZ3 mines (above what is necessary to recover Direct Costs) is being allocated to contribute towards the costs of these investments made in PZ1?

This section of the submission seeks to address such equity considerations insofar as they are relevant to the existing approach to revenue allocation.

8.1 Investment in the Hunter Valley Coal Network

As discussed at section 7 of this submission, investment in network infrastructure tends to have a long economic life and hence a long capital recovery period. Over that time, the structure of the industry will continue to develop and evolve (and perhaps even contract), as will the users of the infrastructure.

Decisions to invest in Hunter Valley coal network to increase its capacity are clearly made from a medium to long term perspective. Often, the volume growth needed to underpin investment in capacity enhancements is not achievable immediately and as such the infrastructure owner must reflect the cost of the investment in higher initial pricing (pre-ramp up of volumes) as the efficient investment costs are spread over lower volume. Alternatively, if higher initial pricing cannot be afforded, the infrastructure owner must bear the risk of under-recovery of the cost of investment in early years. Indeed, ARTC has stated that one of the reasons for introducing loss capitalisation into the Hunter Valley regulatory framework was to in part mitigate such risks.

As stated earlier in this submission, historically it has been important to encourage the growth and development of the Hunter Valley. This has remained a policy imperative for the New South Wales Government when it intervened in the development of the long term solution in the Hunter Valley coal supply chain, where it required that it "contain a mechanism that catered more expressly for new entrants to the Hunter Valley to access export capacity."[75]

Some investments are more discrete and may clearly benefit a specific group of users. However, more commonly, for investments in shared network infrastructure it can be practically difficult to delineate between 'beneficiaries' or 'non-beneficiaries' when the investment is made, let alone over the life of that investment. For example, existing users may consider that they do not benefit from an expansion if they are not looking to expand their contracted capacity, however they could still benefit in a number of ways, for example, by enabling them to run more ad hoc services, reducing maintenance expenditure and/or reducing congestion and improving service quality.

Such investments are common in the Hunter Valley coal network where investment may be implemented in a localised part of the network (say, in a Pricing Zone) but beneficiaries of the enhanced capacity resulting from that investment emanate from other parts of the network. Indeed most investments in practice provide increased capacity for the Hunter Valley coal 'system' (or coal chain) rather than for a user or particular group of users.

Investment decisions therefore need to contemplate the cost and benefits of capacity enhancing investments in terms of the broader Hunter Valley coal 'system' rather from the perspective of a part of network (and mines) close to the location of the investment itself.

The pricing principles commonly applied under a regulatory framework can struggle to recognise the 'system'-wide nature of beneficiaries of a capacity enhancing investment in a network. A risk in applying the pricing principles is that responsibility for contribution to the recovery of investment costs can be too narrowly focussed around physical use of the enhanced infrastructure, rather than approached from the perspective of the beneficiaries of the investment, both directly and indirectly.

Examples of where the nexus between a user benefitting from investments in the Hunter Valley coal network and paying for the investments is not clear are:

[75] ACCC (2009), op. cit., p.15.

- **Investments in PZ3 to increase capability for 30Tal operations from the Gunnedah Basin.** Clearly the Gunnedah Basin producers will benefit from these investments by being able to transport more coal in fewer trains resulting in reduced operational costs and increased capacity for coal transport in PZ3. However it is likely that operating fewer Gunnedah Basin coal trains that might have otherwise been the case will result in additional capacity in PZ1 than can be utilised by PZ1 and PZ2 mines. In this case, the application of the HVAU Pricing Principles prevents any recovery of this investment cost in PZ3 from PZ1 and PZ2 mines.

- **Investments in PZ1 that do not materially benefit Gunnedah Basin producers.** Investments in PZ1 may not result in any material benefit for Gunnedah Basin producers but when they are able to contribute to PZ1 fixed cost in the future this will provide from some recovery of this cost of investment solely because coal trains from PZ3 mines operate through PZ1. An example of this could be investments to improve performance of junctions that connect a small number of mines to PZ1.

In summary, it is ARTC's view that the substantial majority of investment in Hunter Valley coal network capacity results, in some way, in benefits for the Hunter Valley coal 'system' (the Hunter Valley coal chain) rather than for particular group of users situated in the Pricing Zone in which the investment takes place. The benefits of investments in Hunter Valley coal network capacity also generally accrue over the long term.

ARTC would expect that pricing and investment decision making in relation to the Hunter Valley should be, and is, contemplated from a longer term, system-wide perspective.

8.2 Investment benefits and cost recovery in the Hunter Valley coal network

At **Figure 5** below, ARTC has provided a profile of historical and forecast volume growth (since 2004-05) and forecast growth (to 2020) for each Pricing Zone and the cost of investment in each Pricing Zone over that period that has underpinned that growth. Also shown are the points in time in which more substantial projects in each Pricing Zone were, or are planned to be delivered.

At **Figure 6 and Figure 7** below, ARTC has provided historical and forecast estimates of the contribution towards recovery of fixed cost in PZ1 (including the cost of PZ1 investments) from revenue collected from PZ2 mines and PZ3 mines respectively. The years shown in Figures 6 and 7 are aligned to that in Figure 5 to enable comparison in each year.

Figure 5 - Hunter Valley Coal Network Volume and Investment Profile

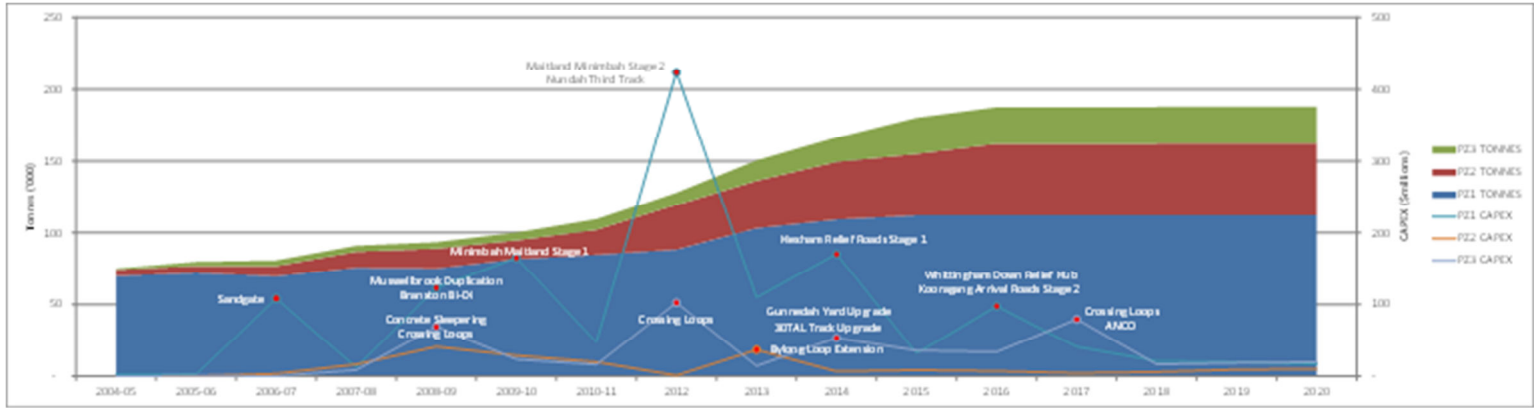


Figure 6 – Recovery of PZ1 Fixed Cost from PZ2 Mines

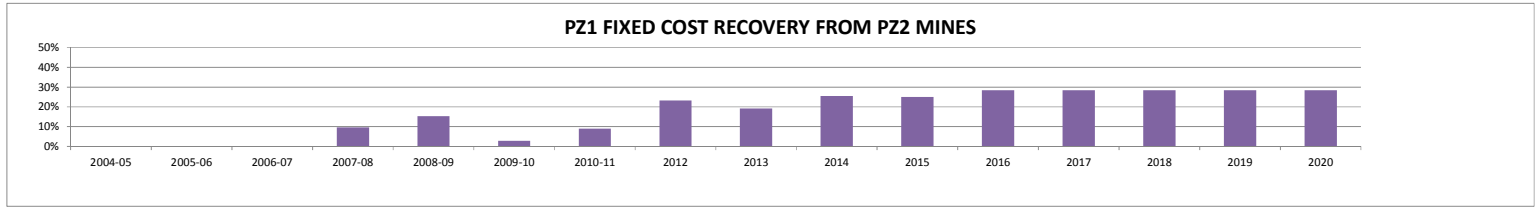
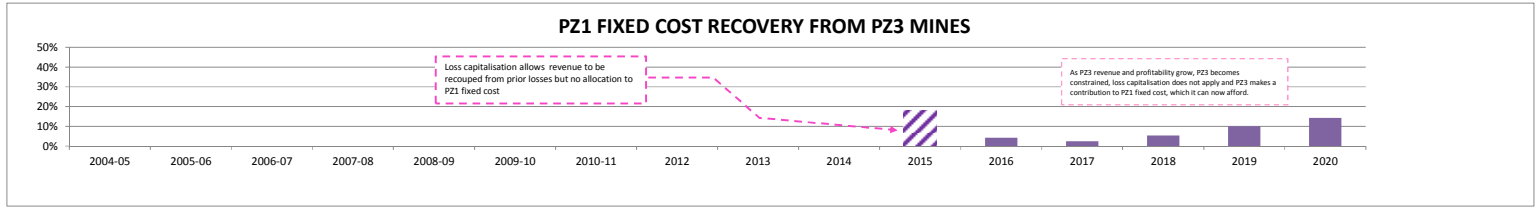


Figure 7 – Recovery of PZ1 Fixed Cost from PZ3 Mines



ARTC provides the following observations in relation to the information provided in **Figures 5, 6 and 7** which have been based on the best available forward forecasts at the time of preparation.

Historic profile to 2013

- There has been significant growth in volumes in all Pricing Zones between 2007-08 and 2013 with most growth in PZ2. Major investments in PZ1 and PZ3 (and to a lesser extent in PZ2) over the period 2008 to 2012 has created the capacity in the system for this growth to date. This would suggest that mines in all Pricing Zones have benefitted from the investments in Pricing Zones 1 and 3 to date.

- Over this period, and since the Ulan line mines became part of the Constrained Group of Mines, the revenue generated from the growth in PZ2 volumes (and therefore the ability of PZ2 mines to pay at prevailing pricing levels) has been allocated to recover an increasing share of PZ1 fixed cost (and PZ1 investments) since 2007-08. The current contribution to PZ1 fixed cost (around 20%) is broadly aligned with utilisation of PZ1 by PZ2 mines.

- Although investment in PZ3 over this period has been relatively high, the growth in PZ3 volumes has not been substantial compared to that for PZ2. This may suggest that PZ2 and possibly PZ1 mines have benefitted from the increased capacity in PZ1 that may have resulted from PZ3 investments over this period.

- Over this period, PZ1 and PZ2 mines make no contribution to PZ3 fixed cost.

- The revenue generated from the lesser growth in PZ3 volumes (and therefore the ability of PZ3 mines to pay at prevailing pricing levels) is yet to be sufficient to recover fixed cost (and cost of investment) in PZ3, and so is yet to be sufficient to be allocated to recover a share of PZ1 fixed cost (and PZ1 investments) to date.

- Over this period, the profile of investments and volume growth tend to support the 'system'-wide nature of the benefits of the investments.

Forecast profile to 2020

- Continued growth in volumes is forecast for all Pricing Zones with PZ2 and to a lesser extent PZ3 contributing to most of this growth. The majority of investment in the network is forecast to continue to be in PZ1 and PZ3. This would suggest that mines in all Pricing Zones will continue to benefit from the investments in Pricing Zones 1 and 3 to date.

- Volume growth expectations in all Pricing Zones have declined significantly over the last few years. At the time of investment decision making in relation to recent investments (2012-2014), higher volume growth was expected in all Pricing Zones, and investments would have been designed to deliver capacity to meet the higher growth expectation in all Pricing Zones, and mines in all Pricing Zones would have been intended to benefit from these investments.

- Over this period, the revenue from the continued growth of Ulan line volumes (and therefore the ability of PZ2 mines to pay at prevailing pricing levels) continues to be allocated to recover an increasing share of PZ1 fixed cost (and PZ1 investments). The current contribution expectation of PZ2 mines to PZ1 fixed cost (around 25%) is broadly aligned with utilisation of PZ1 by PZ2 mines.

- Over this period, PZ1 and PZ2 mines make no contribution to PZ3 fixed cost.

- The revenue generated from the growth in PZ3 volumes (and therefore the ability of PZ3 mines to pay at prevailing pricing levels) is expected to be sufficient to recover fixed cost (and cost of investment) in PZ3 in 2015. In 2015, revenue is expected to be sufficient to recover losses previously capitalised up to 2014. From 2016, continued growth in volumes and revenue is expected to result in revenue being allocated to recover a share of PZ1 fixed cost (and PZ1 investments), initially expected to be around 5% and increasing to 15-20%, broadly aligned with utilisation of PZ1 by PZ3 mines.

- The expected impact of loss capitalisation in PZ3 is a delay in the ability of PZ3 mines to contribute to the recovery of PZ1 fixed cost of 2 years.

- By 2020, the combined recovery of PZ1 fixed cost from PZ2 and PZ3 mines is forecast to be around 40-45%.

ARTC contends that the profile of volume growth and investment underpinning Hunter Valley coal network development over the period reinforces the need for investment and pricing decisions to contemplate a 'system'-wide and longer term perspective. This would include considerations of the appropriateness of the approach to revenue allocation as it applies to pricing and investment decisions, and whether equitable outcomes arise.

8.3 Equity considerations in relation to the appropriateness of the approach to revenue allocation

8.3.1 Investment Cost Recovery in the Hunter Valley

As noted at the start of this section, in the Discussion Paper the ACCC has drawn the attention of stakeholders to the circumstance in 2012 that PZ3 producers currently make no contribution towards fixed cost (including cost of investment) in PZ1, and would seem to be seeking stakeholder views in relation to whether such an outcome may be equitable between PZ1 and PZ2 producers, and PZ3 producers.

ARTC has sought to demonstrate above the need to consider the appropriateness of the revenue allocation approach as it applies to pricing and investment decisions, and whether equitable outcomes arise from a 'system'-wide, longer term perspective. Given this, the ACCC's presentation to stakeholders in the Discussion Paper, which focuses on the outcomes in a particular year and in relation to particular investments in certain Pricing Zones, does not represent a perspective

that is comprehensive enough to enable sufficiently informed stakeholder consideration and comment in relation to equity considerations around the application of the existing approach to revenue allocation.

To this end, ARTC provides the analysis below in order to provide a wider perspective in relation to the application of the benefits of Hunter Valley coal network investment and the recovery of the cost of those investments. The analysis contemplates outcomes in relation to these elements over a longer time period and from a 'system'-wide perspective rather than a narrow view in a temporal sense. The analysis is presented to the ACCC and stakeholders for consideration of the approach to revenue allocation in terms of whether equitable outcomes arise.

ARTC has considered the growth and investment profiles shown in **Figure 51** over the period 2007-08 to 2020, being the period over which most significant growth and investment in the Hunter Valley coal network has occurred. ARTC considers that this time period is more commensurate with the period over which pricing and investment decision are made.

As shown at **Figure 5** above, Hunter Valley coal network volumes have grown from around 91mTpa in 2007-08 to 187mTpa projected in 2020. Over this period investment in the Hunter Valley coal network in order to create capacity for this volume growth is expected to be around $2bn.

In order to describe the application of benefits of this investment to PZ1 and PZ2, and PZ3, **Table 3** below shows the respective increase in volumes over this period.

Table 3 – Hunter Valley coal network Volume Growth 2007-08 to 2020.

	Hunter Valley Coal Network	PZ1 & 2 Constrained	PZ3
Volume Growth	97mTpa	75mTpa	22mTpa
% share		77%	23%

As such, in a 'system'-wide sense, PZ3 mines will have derived around 27% of the capacity benefits arising from investment in the Hunter Valley coal network over the period 2007-08 to 2020. 73% of the capacity benefits arising from investment in the Hunter Valley coal network over the period 2007-08 to 2020 will be derived by PZ1 and PZ2 mines.

Table 4 below shows the respective investment in the Hunter Valley coal network over this period.

Table 4 – Investment in the Hunter Valley coal network 2007-08 to 2020.

	Hunter Valley Coal Network	PZ1 & 2 Constrained	PZ3
Investment	$1.98bn	$1.48bn	$0.50bn
% share		75%	25%

As the HVAU Pricing Principles prevent PZ1 and PZ2 mines from paying for any investment in PZ3, PZ3 mines are paying for at least 25% of the investment in the Hunter Valley coal network over the period 2007-08 to 2020. Where revenue from PZ3 mines is allocated to the recovery of fixed (and investment) costs in PZ1 in the future this proportion will be even higher.

As such, where a 'system'-wide, longer term perspective is presented, the extent of the cost recovery of investment in the Hunter Valley coal network over the period 2007-08 to 2020 from PZ3 producers will, at least, align to the extent of utilisation of their increased capacity of the network arising from that investment.

ARTC contends that this represents a more appropriate and comprehensive presentation of the derivation of benefits and recovery of the cost of investments in Hunter Valley coal network capacity than that provided by the ACCC in the Discussion Paper, for consideration by the ACCC and stakeholders as to the question of the appropriateness of the approach to revenue allocation as it applies to pricing and investment decisions in the Hunter Valley coal network, and whether equitable outcomes arise.

Even without any allocation of revenue from PZ3 mines towards the recovery of PZ1 fixed (and investment) costs, PZ3 mines are paying an equitable share of the cost of investment in Hunter Valley coal network capacity over the long term, commensurate with the utilisation of the capacity made available by that investment. Allocation of revenue from PZ3 mines towards recovery of PZ1 fixed (and investment) cost is forecast to commence in 2017. This will further reduce costs for PZ1 and PZ2 mines.

Further, the evidence of Hunter Valley growth and investment over the longer term indicates that constraining ARTC's pricing flexibility under the HVAU in order to align recovery of fixed (and investment) cost in each Pricing Zone to utilisation of capacity in that Pricing Zone may result in inequitable outcomes over the longer term.

The application of loss capitalisation in PZ3 supports the consideration of a longer term perspective in investment and pricing decision making and provides a mechanism for enabling revenue from PZ3 mines to recover the cost of investment in PZ3 in the long term.

8.3.2 Access Pricing in the Hunter Valley

As has been stated earlier in this submission, the current application of the Floor and Ceiling Revenue Limits and revenue tests under the HVAU and NSWRAU affords the track owner with some flexibility in relation to the determination of access charges. Such flexibility enables the track owner to pursue objectives in relation to pricing of access to coal such as maximising cost recovery, providing efficiency incentives, encouraging network expansion and facilitating effective competition.

In negotiating access pricing with Gunnedah Basin producers in an environment where this coal producing region is currently still be developed and expanded, this pricing flexibility (together with the operation of loss capitalisation under the

HVAU) provides a framework for ARTC, in making its pricing decisions, to effectively manage its own internal business risks (such as revenue adequacy and investment risk) having regard to broader industry objectives including incentives for efficient utilisation of the network, and encouraging the development and growth of the network.

ARTC has sought to demonstrate the long term system benefits that will accrue to all Hunter Valley coal producers resulting from pursuing these broader objectives earlier in this section.

In order to encourage the development of the network to facilitate expansion of the Gunnedah Basin, ARTC recognises that a balance in access pricing must be achieved between enabling Gunnedah Basin producers to compete effectively with other coal producers, and ensuring equitable recovery of the significant cost of network volumes to enable the expansion of the Gunnedah Basin.

To date, ARTC has sought to achieve this balance by taking a long-term, system-wide view as is supported by the application of the revenue tests and loss capitalisation under the HVAU.

Without such provisions, the resulting constraints on pricing flexibility will limit ARTC's ability to achieve a balance, which may impact of development and sustainability of the Gunnedah Basin expansion.

Table 5 below shows the existing level of access pricing (converted to a cents per NTK basis) for a representative mine in each Pricing Zone. To preserve confidentiality, the identity of the mines is not shown.

Table 5 – Existing Hunter Valley coal network access pricing.

	PZ1	PZ2	PZ3
Cost of Access (c/NTK)	1.7	1.7	2.0

The cost of access on a cents per NTK basis enables comparison with the distance element removed, but still reflecting pricing differentials arising from the different train configurations being utilised. As might be expected the cost of access for PZ1 and PZ2 mines is very similar. This is due to the fact that the mines are both constrained and that train configurations used are similar.

The unit cost of access for Gunnedah Basin mines is currently around 20% higher on a cents per net tonne kilometre basis. Whilst some of this differential results from the different efficient train configurations used by Gunnedah Basin mines and PZ1 and PZ2 mines, the negotiated outcome for Gunnedah Basin mines is still high compared to regulated pricing for the constrained PZ1 and PZ2 mines. This pricing outcome still arises despite PZ1 and PZ2 mines currently paying for the fixed cost of the Constrained Network and Gunnedah Basin mines currently making no contribution towards this cost.

It is ARTC's view that the higher cost of access for Gunnedah Basin mines results from the negotiation of a cost of access that reflects a balance between promoting the development and expansion of the Gunnedah Basin (a cost of access that is competitive in the Hunter Valley market) and the recovery of a reasonable level of

the cost of recent investment in PZ3 balance where volume **at this time** is insufficient for full recovery (revenue maximisation). The achievement of such a balance is achievable as a result of provisions incorporated in the HVAU such as pricing flexibility under revenue tests, and loss capitalisation in PZ3.

ARTC has sought to demonstrate that the existing pricing levels are equitable and do not result in any adverse competitive outcomes, whilst promoting efficient outcomes in terms of Hunter Valley coal network development and investment.

Placing constraints on the existing level of pricing flexibility will limit the ability of relevant parties to achieve balanced outcomes.

9 ARTC IMPACTS AND RISKS

This section will focus on the possible implications of any change that reduces ARTC's flexibility in how it sets pricing within floor and ceiling revenue limits and allocates revenue. In particular, this review has prompted significant concerns within ARTC regarding future regulatory certainty, which has the potential to undermine its confidence in the future stability of the regulatory framework and have a detrimental impact on its incentives to invest. This section also demonstrates how a change in the way in which ARTC allocates revenue from 2016 could have a significant and detrimental impact on the revenue recovery profile for PZ3, reducing the likelihood that this segment will become constrained, which would enable ARTC to increase the contribution that these users make to common network costs.

The preceding chapter has demonstrated why ARTC's current revenue allocation approach is efficient, having regard to the objects clause and Pricing Principles in the CCA. This section will focus on the possible implications of any change that reduces ARTC's flexibility in how it sets pricing within floor and ceiling revenue limits and allocates revenue.

9.1 Regulatory certainty

9.1.1 The importance of regulatory certainty

As cited in section7.1.2 of this submission, one of the factors that the Productivity Commission has acknowledged could discourage investment is regulatory risk associated with access regulation, including uncertainty regarding future access obligations[1].

During development of the HVAU between 2009 and 2011, it became apparent to ARTC that one of the key benefits of establishing the HVAU was that it would provide certainty going forward for both ARTC and producers under a new commercial and operating paradigm in the Hunter Valley.

To this end, ARTC initially proposed a term for the HVAU of 10 years, roughly aligned with contractual time frames. Whilst this was originally supported by producers in order to underpin future planning and investment in coal and rail infrastructure, the industry ultimately became concerned about locking in a number of new and untried processes for such a long period of time. ARTC was always supportive of a longer term as it provided ARTC with the certainty needed to underpin long term investment decision making in the Hunter Valley. In the end, ARTC reluctantly conceded to a shorter 5 year term under pressure from producers and the ACCC.

[1] Productivity Commission (2013). p.101.

ARTC is therefore very concerned that the ACCC is now seeking to conduct a review into a fundamental element of the HVAU, one that has been in practice for many years, only 2 1/2 years after the Commencement Date. This has raised the spectre of a substantial alteration of the approach to pricing under the HVAU, after only 18 months of approved revenue under this new framework.

As described earlier, the existing pricing flexibility has underpinned ARTC's earlier pricing decisions since commencement of the HVAU including:

- 2013 coal pricing
- 2014 coal pricing
- price differentiation under the Initial Indicative Service variation
- 2014 pricing proposed under the Gap to Turrawan variation
- 2015 pricing proposed under the Final Indicative Service variation.

These pricing decisions were made on the basis of certainty of the HVAU Pricing Principles, at least until its expiry.

Whilst it is not clear to ARTC whether the ACCC can now determine that revenue is no longer compliant with the HVAU, the possibility of this occurring in the near future gives rise to substantial uncertainty for ARTC in relation to cost recovery resulting from past decisions made, as well as future pricing decisions sought by the industry.

9.1.2 Impacts on future investment

Where the industry comes to ARTC with proposals to participate in, invest in, or grow the Hunter Valley coal chain, it seeks a degree of certainty in pricing and revenue outcomes in the medium to long term. The HVAU is intended to provide an environment where ARTC could give some certainty (albeit for only 5 years), to enable above rail and mine investment decisions to be made. It is very difficult for ARTC to provide the pricing certainty needed by the industry to invest, where its own certainty in pricing decisions in a regulated environment is undermined.

Examples of where this might be adversely impacted include:

- *Gap to Turrawan investment*. The ACCC sought for ARTC to consult with Gunnedah Basin producers to negotiate an outcome on the outstanding aspects of ARTC's variation proposal. In response, ARTC finalised an agreed position with these producers that involves support for the Gap to Turrawan DORC valuation. The producers preparedness to support this valuation was in large part based on an understanding of future cost (including cost of investment), volume and price expectations. These were modelled on the current and accepted approach to revenue allocation inherent in the floor and ceiling revenue tests under the HVAU. A regulatory decision to change this approach significantly undermines the merit of the negotiated process that the ACCC has encouraged.

- *Maules Creek*. The projected $767 million Maules Creek project has been developed by Whitehaven based on cost assumptions including the longer term cost of access to the Hunter Valley coal network. Whitehaven has now committed to the majority of this expenditure. Where the ACCC may consider changing the basis upon which cost of access has been determined, the resulting uncertainty surrounding future pricing is likely to have a greater bearing on future investment decisions.

- *ARTC's financing facilities*: ARTC currently has debt facilities (domestic bonds on issue and bank debt facilities) of approximately $1.5billion which are a core aspect of ARTC's continuing ability to invest in rail infrastructure in the Hunter Valley and elsewhere on its network. The terms and costs of these debt facilities are highly dependent upon ARTC's public credit rating. ARTC's ability to maintain its current credit rating and suitable debt facilities could be adversely impacted by any changes to its regulatory framework that would reduce its future revenue certainty.

- *PZ3 viability:* Imposing a constraint on pricing that requires revenue from PZ3 producers to pay for investments in PZ1 even when PZ3 volumes are not fully developed will significantly reduce current cost recovery in PZ3. Whilst loss capitalisation acts to enable ARTC to recover the increased early losses if volumes grow sufficiently in future years such recovery is not certain. It is dependent on producers that are likely to be the most marginal and is likely to be further distant into the future than it otherwise might have been. This increased risk reduces the appetite to invest in PZ3 for growth, and constrains development of the outer regions of the Hunter Valley network (a common growth profile for development of development of minerals regions).

- *Distortion of investment incentives:* Whilst investments in the outer 'dedicated' parts of the Hunter Valley network are always likely to be riskier than investments in the inner 'shared' parts of the network, a change in approach to pricing and revenue allocation may alter and likely increase this risk differential. The resulting increased incentives towards investing in the lower regions of the Hunter Valley coal network may result in sub-optimal investment decisions for the Hunter Valley system in terms of location, timing and sequence that in turn will have consequences for ensuring dynamic efficiency is achieved.

9.1.3 Ensuring constructive engagement

It is of some concern to ARTC as to how stakeholders may respond to this review, and the extent to which responses will be constructive and objective. Many stakeholder organisations are obligated to act in the best interests of their shareholders and are therefore naturally incentivised to respond to such a review based on whether they perceive that they could be better or worse off than under the current arrangement.

In this case, producers in PZ1 and PZ2 (who are dominant in number) will have little incentive to continue to support the current approach, including acknowledging the information that has been made available and the consultation that has occurred in the past. Instead, this may be seen as an opportunity to secure competitive advantage relative to their competitors in PZ3 in the short term at the

risk of constraining investment and increasing risk in the Gunnedah Basin. The HVAU is intended to encourage competition and new entry particularly in growth areas such as the Gunnedah Basin. As cited in section 7.2.2, this has previously been recognised in the US, where concerns about relative price rather than actual price have led to a 'predictable' focus on constraining price discrimination.

In must be emphasised that ARTC is fully supportive of an open and transparent consultation process in the context of any regulatory review. However, all participants are incentivised to act in the best interests of their shareholders and the challenge is how to balance these vested interests with broader efficiency considerations.

9.2 Revenue recovery

As previously demonstrated, the current arrangements present ARTC with the requisite flexibility to maximise the likelihood that it will recover its fixed costs (including an appropriate return on investment), based on efficient pricing principles. While the basis of any change in approach is unknown, this section examines the possible impact of reduced pricing flexibility on ARTC's future revenue recovery.

Removing the ability to allocate revenue as currently occurs, for example by forcing revenue to be allocated to a segment based on the volume and price for that segment, could force a substantial amount of PZ3 journey revenue to be allocated to PZ1 segments. This would effectively reduce the revenue that can be collected from PZ1 journeys to a level below the existing Ceiling Limit under the HVAU for those journeys (being their stand-alone Economic Cost). Restricting revenue for these users to a level that is below their capacity (and willingness) to pay is not considered efficient, noting that this also increases risk to users in unconstrained parts of the network who may be required to pay a charge that they cannot currently afford where a reasonable relativity of pricing between mines to ensure effective competition is also desirable.

Removing the ability to allocate revenue as currently occurs will substantially reduce existing levels of cost recovery for PZ3 segments. ARTC estimates this to be currently around $30-40 million. As noted in the previous chapter, while the loss capitalisation mechanism is available this could ultimately exacerbate asset stranding risk, which is not compensated by the rate of return.

9.2.1 Possible impacts on PZ3 revenue recovery profiles

The following figures show projections for PZ3 cost, revenue and cost recovery, as well as the relationship between RAB and RAB Floor Limit, which governs the application of loss capitalisation and compliance in PZ3.

Projections are based on current contracted volumes in PZ3 and reasonable price adjustments over the period to 2024.

Figure 8 Loss Capitalisation applicable and revenue allocation applied as per current arrangement

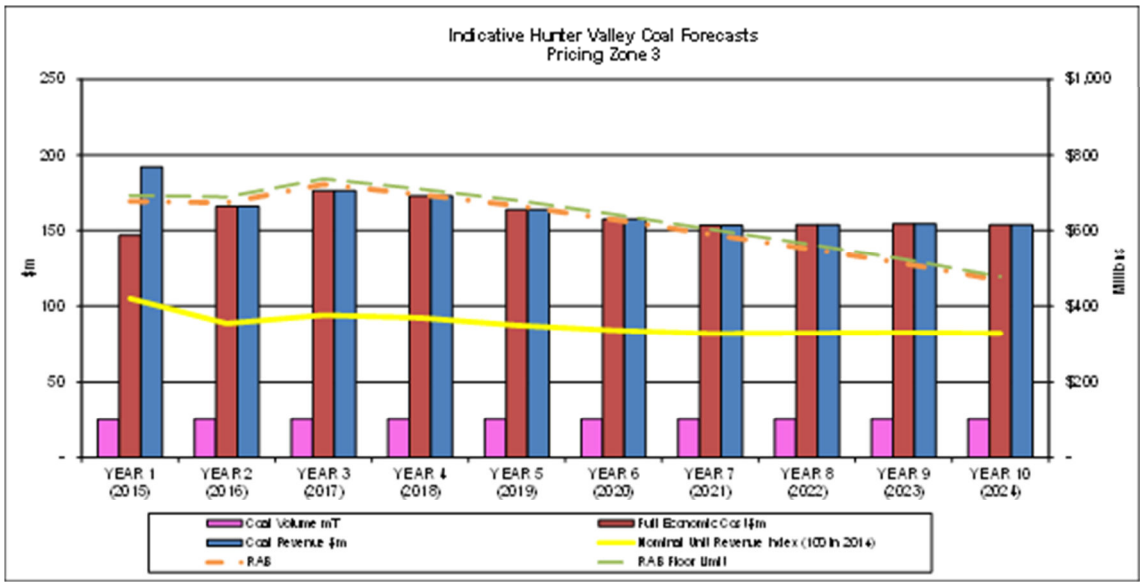


Figure 8 shows that where the current approach to revenue allocation continues to be applied, full recovery of Economic Cost in PZ3 and recovery of prior year capitalised losses is projected to occur in 2015. From, this point where volumes continue to grow, any additional TOP revenue will no longer be able to be applied to recover fixed cost in PZ3 but will be allocated to PZ1, contributing to the recovery of fixed costs in PZ1 and reducing pricing for existing PZ1 and PZ2 producers (all else being equal).

The following figure contrasts the situation where the current approach to revenue allocation is changed from 2016, for example, to where all TOP revenue was allocated to each Pricing Zone on the basis of say, TOP price times GTK.

Figure 9 Loss Capitalisation applicable and no revenue allocation aligned to price and volume by Pricing Zone from 2016 onwards

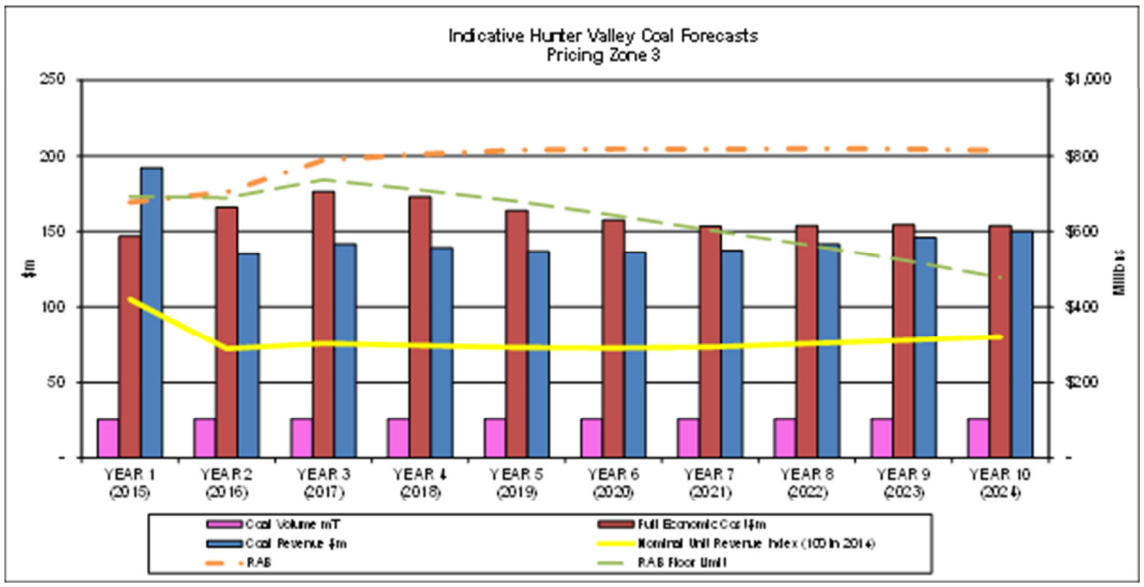


Figure 9 indicates that under this scenario, PZ3 would return to being unconstrained and losses would be capitalised. With an assumption of reasonable price increases in PZ3 over the period, it shows that losses would be capitalised with no recovery until at least 2024. Further, there are no clear prospects of recovery in the short to medium term beyond that, without significant further volume growth and investment.

The above scenarios suggest a stark difference in PZ3 financial performance and risk for ARTC going forward. Whilst the ability to capitalise losses in PZ3 affords a degree of mitigation against this increased risk, the prospect of being able to eventually recover these losses is uncertain, particularly where the mines involved are likely to be the most marginal and exposed to Hunter Valley and global competitiveness. This in turn will reduce ARTC's appetite for investment in the Gunnedah Basin.

In 2011, the ACCC approved an estimate of average remaining mine life for Hunter Valley mines of around 21 years (that is, to 2034). This was based on available projections by coal companies at the time, when coal prices and mine profitability were substantially more robust than they are currently. Given this, if recovery is deferred until the period beyond 2024, and towards 2034, an investor is unlikely to have confidence that these losses will be recovered at all. Otherwise, there may be an expectation for ARTC to seek higher pricing and cost recovery on PZ3 segments in the short term, which is likely to increase the marginality of the relevant producers.

9.2.2 Impact on other unconstrained coal journeys

As cited in section 3.3.1, the Constrained Network contains Segments that are utilised by the operation of Coal Trains serving the Constrained Group of Mines that operate entirely within the Constrained Network (that is, between the Constrained Group of Mines and the ports). Currently the Constrained Group of Mines are all mines in PZ1 and PZ2 and the Constrained Network includes all Segments between those mines and the ports.

There are a number of Coal Train journeys that operate outside of the Constrained Network (but may utilise part of the Constrained Network). Such journeys may originate from a mine outside of the Constrained Network (an unconstrained mine) or terminate at a location outside of the Constrained Network (e.g. a southern power station or port). Such journeys presently include:

- Gunnedah Basin hauls to Newcastle port;
- North Coast mine hauls to Newcastle ports;
- Hauls from mines south of Newcastle to Newcastle port; and
- Hauls from Hunter Valley mines to power stations and ports south of Newcastle (e.g. Port Kembla).

All of these journeys utilise at least part of the Constrained Network. The current approach to revenue allocation permitted under the HVAU applies to all of these

unconstrained journeys. A change in approach will have pricing and investment implications for all of these journeys.

9.2.3 Impact on non-coal journeys

It is explicitly recognised in the HVAU that revenue from non-coal journeys in the Hunter Valley Constrained Network only meets Direct Cost. Such journeys originate and terminate outside of the Constrained Network (and even the Hunter Valley Network). ARTC applies revenue related to non-coal journeys consistent with its approach applied to unconstrained segments.

Limiting ARTC's ability to allocate revenue in this way will similarly impact on the cost recovery of the branch line 'feeder' network, placing these networks at risk of closure (in the absence of a Government CSO). As well as the social implications of the transfer of such journeys to road (or disappearance of regional supply sources), this would reduce the available of rail passenger services to regional communities.

9.3 Conclusion

This review has prompted significant concerns within ARTC regarding future regulatory certainty, which has the potential to undermine its confidence in the future stability of the regulatory framework and have a detrimental impact on its incentives to invest. Recognising the inherent uncertainty in investing in coal supply chain infrastructure over the long term, the predictability of future revenue outcomes – which is influenced by the stability of the regulatory framework – is important to investors, lenders and ratings agencies.

ARTC has demonstrated how a change in the way in which it allocates revenue from 2016 could have a significant and detrimental impact on the revenue recovery profile for PZ3, reducing the likelihood that this segment will become constrained, which would enable ARTC to increase the contribution that these users make to common network costs.

APPENDIX 1

NSW RAIL ACCESS UNDERTAKING

RELEVANT DEFINITIONS

Access means the right to enter onto the NSW Rail Network to operate or move rolling stock.

Access Seeker means the following:

(a) a Rail Operator; or

(b) a prospective Rail Operator who, in the opinion of the Rail Infrastructure Owner, has the capacity to provide rail services of the type for which Access is sought; or

(c) an Access Purchaser; or

(d) a prospective Access Purchaser who, in the opinion of the Rail Infrastructure Owner, has the capacity to secure and properly manage the services of a Rail Operator; or

(e) the National Rail Track Corporation.

Access Purchaser means a person who has contracted with a Rail Operator in respect of the operation or movement of Rolling Stock.

Rail Infrastructure Owner has the same meaning as "rail infrastructure owner" in the Transport Administration Act.

Rail Operator means a person who is responsible for the operation or moving, by any means, of any rolling stock on the NSW Rail Network.

National Rail Track Corporation has the same meaning as "national rail track corporation" as defined in clause 9 of Schedule 6AA of the Transport Administration Act.

Transport Administration Act means the Transport Administration Act 1988 (NSW).

Direct Costs means efficient, forward-looking costs which vary with the usage of a single operator within a 12 month period, plus a levellised charge for variable MPM costs, but excluding Depreciation.

Sector means a continuous length of track with end points, usually delineated by major junctions or traffic origins and including all facilities associated with the track on that sector.

Line Sector CSOs means payments made to either RIC or RailCorp (but not the National Rail Track Corporation) to enable each of them to meet their obligations to renew, restore, manage, upgrade and grant access to the NSW Rail Network, but excludes any incentive payments, such as payments in respect of the achievement of key performance indicators.

RIC means the Rail Infrastructure Corporation constituted under the Transport Administration Act.

RailCorp means the Rail Corporation New South Wales constituted under the Transport Administration Act.

Full Incremental Costs means all costs which could be avoided if a Sector was removed from the system.

Full Economic Costs are Sector specific costs including a permitted Rate of Return and Depreciation and an allocation of non-Sector specific costs such as train control and overheads including a Rate of Return and Depreciation on non-Sector specific assets. All included items are to be assessed on a stand alone basis.

Rate of Return means a rate of return in percentage terms approved by IPART for a period of five years to be applied to the average of the Opening and Closing Regulatory Asset Base. The Rate of Return approved by IPART for the period from 1 July 1999 is 8.0 percent on a real, pre tax basis.

Depreciation means depreciation of the Regulatory Asset Base, over the useful life of the Regulatory Assets calculated on a straight line basis.

Regulatory Asset Base means the capital value of the Regulatory Assets as determined in accordance with clause 3 of this Schedule and further:

(a) Shall be based on an initial valuation of the Regulatory Asset Base calculated using the depreciated optimised replacement cost methodology.

(b) Where applied in relation to a Sector or group of Sectors means the capital value of that Sector or group of Sectors determined in accordance with clause 3 of this Schedule and includes that portion of non-Sector specific assets allocated in accordance with the Rail Infrastructure Owner's asset allocation policy.

Regulatory Assets means the facilities and associated assets used in the provision of Access to the NSW Rail Network and where the term is used in relation to a Sector or group of Sectors shall include the facilities and associated assets used in the provision of Access to that Sector or those Sectors and includes non-Sector Specific Assets.

Opening Regulatory Asset Base means the value of the Regulatory Asset Base at the start of a financial year determined in accordance with clause 3 of this Schedule.

Closing Regulatory Asset Base means the value of the Regulatory Asset Base at the end of a financial year determined in accordance with clause 3 of this Schedule.

NSW Rail Network has the same meaning as "NSW rail network" in the Transport Administration Act.

APPENDIX 2

IPART REVIEW OF ASPECTS OF THE NSW RAIL ACCESS REGIME

ISSUES PAPER, OCTOBER 1998

APPENDIX B: COST ALLOCATION AND PRICING ISSUES

The following section discusses some of the relevant cost allocation and pricing issues.

Fully Distributed Costs

Under the fully distributed cost (FDC) method, the total costs of the activity or business are allocated across all the services provided by RAC. Direct costs are allocated to their respective line section, while indirect and joint costs are allocated across all services. For example, indirect costs can include capital costs associated with corporate overheads. Thus the cost base for each service will include a proportion of the capital costs of the business, including those used indirectly to produce the service. These latter costs may include the assets of corporate services areas.

In most cases indirect costs are allocated to activities on a pro-rata basis. They may, for instance, be allocated as a proportion of:

- staff involved in the activity as a proportion of total staff
- the activity as a percentage of total resource use
- the budget for the activity as a percentage of the total business budget.

Marginal cost

Marginal cost is the change in total costs for the production of an additional unit of good or service. It can be measured in the short run or long run. Conceptually short run marginal cost (SRMC) gives the best indication of the cost of producing an additional unit at any point in time. It excludes capital costs because these are fixed in the short run. SRMC also excludes a range of indirect costs such as generic advertising or management time of the chief executive officer, since they too are not expected to vary with output in the short run.

In practice, the SRMC is difficult to define and measure. There are problems in specifying what period is the short run, over what increment in output costs are measured and how to treat joint costs. In addition, prices for services such as rail, which use capital in large incremental steps, could display significant variability if they were based on SRMC. For example, if the current capacity of a line section is fully utilised, then pricing at SRMC will result in high prices because the cost of producing one more unit of service will include the cost of new investment in infrastructure. Any new investment is likely to take into account projected future demand and that the initial utilisation of new line sections is likely to be low. Using SRMC for pricing after the completion of new investment will result in a dramatic

fall in prices since the cost of providing one more unit of service output will be negligible (on the assumption that, having just completed a major capital project, there would no intention of further investment in the short run).

An alternative measure is the long run marginal cost (LRMC). LRMC is the cost of supplying an additional unit of a good or service when capacity can be varied. It comprises not only operating costs, but also capital costs associated with increasing productive capacity in the longer term. Conceptually, LRMC is the correct cost base for making investment decisions, and setting prices based on LRMC could overcome much of the variability inherent in SRMC.

However, LRMC also encounters measurement difficulties, and may require complex calculations to incorporate the impact of new capacity on the production system already in existence.[27]

Incremental cost

One practical implementation of marginal cost can be the incremental cost method. While there are a number of definitions of incremental cost, in practice it is usually related to larger increments of output, and a longer time frame than SRMC. That is, incremental cost is the increase in the businesses' total cost attributable to the production of a particular type of service rather than just the cost of producing the final unit of the service. Long run incremental cost (LRIC) includes operating and maintenance costs, incremental capital costs and incremental indirect costs. However, unlike FDC, the LRIC excludes indirect costs that remain unchanged whether the service is supplied or not. Refer to Table B1 for an example of the costs included and excluded under different cost allocation methods.

Although some discussions of LRIC suggest joint capital costs can be allocated on much the same basis as under an FDC approach, a purer interpretation of LRIC excludes these costs.

The essence of joint costs is that they are not incremental to providing the additional service.

Avoidable cost

Avoidable cost is another practical measure of marginal cost. It includes all costs attaching to a service which could be avoided if the service was not provided by RAC. Once again, many joint costs cannot be avoided if the service is discontinued, and are therefore excluded from the cost base of the service.

In practice, there is generally little difference between avoidable cost (the reduction in costs over a range of output when production is decreased) and incremental cost (the increase in costs over a range of output when production is increased). This is because the cost saved by not producing a service is often the same as the additional cost in making the service available. However, where the existing railway infrastructure is at or near full capacity then avoidable cost and incremental costs will result in different outcomes.

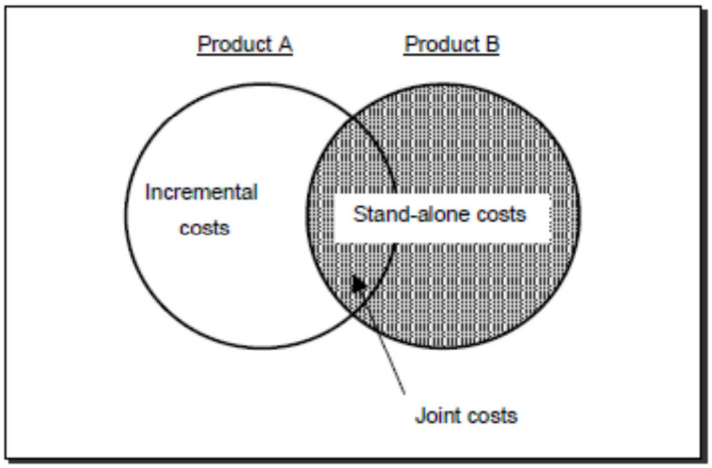
The following table summarises the treatment of various categories of costs under each cost allocation method.

Table B1 Inclusion of costs under different allocation methods28

Indicative Cost Category	SRMC	LRMC	Avoidable /Incremental Cost	Fully Distributed Costs
Direct Costs (eg direct labour, material costs, sales tax)	Yes	Yes	Yes	Yes
Management /executive costs	No	No	No	Yes
Rental charges	No	Often, but not always	Often, but not always	Yes
Other corporate overhead costs	No	Yes	To the extent avoided if activity is not undertaken	Yes
Capital related costs exclusive to the activity	No	Yes	Yes	Yes
Joint capital costs	No	No, in most cases	To the extent avoided if activity is not undertaken	Yes

Monopoly rents and cross subsidies

The nature of rail access pricing under the Regime as outlined in Section 3 of this paper and the cost definitions described in Section 4, raise the issues of monopoly rents and cross subsidies. The following discussion addresses some of the economic concepts underlying these issues, particularly in relation to incremental costs and stand alone costs. By way of example, the following diagram presents an illustration of cost allocation between two products or services[29]:



In the above diagram:

• Incremental costs of Product A are represented by its corresponding circle less the area which overlaps Product B.

• The shaded circle represents stand alone costs of Product B. Stand alone costs are incurred if a group of customers is supplied in isolation.

• Joint costs are represented by the overlap of the two circles.

• Total costs are the incremental costs of Product A plus the stand alone costs of Product B.

Measurement of cross subsidies and monopoly rents can be explained with the use of a hypothetical example. Assume:

• a firm produces two products, A & B

• the total cost of producing A & B is $100

• the stand alone cost of producing B is $80

• the incremental cost of producing A is $20.

Three alternative pricing scenarios can be used to illustrate the difference between cross subsidies and monopoly rents.

Table B2 Examples of cross subsidy calculation

Scenario	Revenue from Product A	Revenue from Product B	Revenue from Products A + B
1	10	90	100
2	10	80	90
3	20	90	110

Scenario 1 results in a cross subsidy from B to A. The price for product A is below incremental cost by $10. This shortfall is funded from a $10 over-recovery against stand alone costs of product B. Total revenues are only just sufficient to cover costs and provide a 'normal' return.

Scenario 2 results in under-recovery of costs funded by below normal profits. Prices for product B do not exceed stand alone costs and total revenues do not cover costs and a 'normal' return.

Scenario 3 results in an over-recovery of costs, which funds monopoly rents. Prices for product B exceed stand alone costs by $10. However, this does not fund a shortfall against product A's costs. Instead, it funds a higher-than-normal return for the firm.

The above example is easily understood because the incremental costs of A plus the stand alone costs of B equal the total costs (ie in the case of two products or two customers). It should be noted that the problem is more complex in the case of three or more customers and is not easily tractable.

For the carriage of coal, the NSW Government charges monopoly rents on miners depending on their geographical location. In the current version of the NSW Access Regime, these rents will be phased out by 1 July 2000. These monopoly rents are essentially a tax on the extraction of coal in order to provide a benefit to the community for the exploitation of their resources. The use of the rail freight system to collect this tax is likely to have significantly distorted rail freight pricing. The revenues from these high freight charges have been either appropriated directly by the government into general revenue or have been used to allow the rail authority to at least partially fund loss-making services.

The level of monopoly rents or coal resource tax is a matter for the NSW Government.

However, the method used to collect them may have had unintended and undesirable impacts on the efficiency of the railway system. The separation of the resource tax from rail freight charges would allow the performance of the rail network to be monitored more closely and promote economic efficiency.[30]

Ramsey pricing

At the current level of demand for rail services, the average cost of service production by RAC (including fixed overhead costs and a rate of return on capital) is greater than the cost of producing a small but measurable increase in output; ie its short run marginal costs (SRMC). If prices for rail access were set at SRMC then RAC would make a loss. In fact, if prices for rail access were set at LRMC, then it is likely that RAC would still make a loss, albeit a lower loss. RAC has a commercial charter and is encouraged to earn a rate of return on its assets. As a result, the Regime attempts to provide a method of allocating costs that should ensure RAC's continuing viability.

If prices set by RAC were variable and dependent on usage of rail line sections, then any mark up of prices over SRMC will reduce usage of the rail line sections. The result is an inefficient use of the communities rail assets. This is where Ramsey Pricing Principles can be used in theory to minimise the losses in allocative efficiency that in theory result when prices for all rail operators on a line section are set above SRMC. These Pricing Principles state that the mark-up above SRMC to cover costs such as overheads and a rate of return should be inversely proportional to the change in services demanded by a rail operator when the price changes. In other words, those rail operators who have a high demand for access to the network, and whose demand is not going to change very much if the price of access is changed, should be charged a higher mark-up over SRMC. Those operators whose demand is likely to change significantly if the price is altered should be charged a lesser mark-up over SRMC.

In addition, a two-part tariff could be utilised where the fixed access charge covers some or all of the fixed overheads and the variable usage charge promotes efficient allocations of track use by setting the variable part of the price equal to SRMC. The fixed access charge could also incorporate Ramsey Pricing Principles to reduce efficiency losses and to reflect different values associated with different train paths. The smallest reduction in rail line utilisation can be achieved this way, so long as the most marginal operator is not forced out of the market.

It is generally accepted that Ramsey pricing is the most theoretically sound method of allocating costs in the situation where natural monopolies such as RAC are required to ensure their ongoing viability. It results in the highest utilisation of the network. However, it is noted that there is considerable difficulty in estimating demand relationships mainly due to data limitations. With the exception of the Sydney metropolitan passenger network and the Hunter Valley coal network, the rest of the network is generally thinly trafficked.

SRMC pricing might be used by RAC for those line sections that are under-utilised. This could promote economic efficiency in the allocation of existing resources and still cover RAC's variable operating costs. The Regime allows the RAC to adopt Ramsey pricing within certain limits determined by the floor and ceiling of the

Baumol band. This could, however, result in prices that may not be fully cost reflective and seen by some customers to be inequitable and price discriminatory.

27 Cost Allocation and Pricing, Commonwealth Competitive Neutrality Complaints Office, October 1998, p9.Independent Pricing and Regulatory Tribunal

28 Cost Allocation and Pricing, Commonwealth Competitive Neutrality Complaints Office, October 1998, p11.

29 From a report prepared for BHP by London Economics (BHP submission to AGL Gas Networks Limited

30 Concepts from report by the Industry Commission, The Australian Black Coal Industry, April 1998, p166.

APPENDIX 3

PRELIMINARY HVAU DEVELOPMENT

STAKEHOLDER CONSULTATION DOCUMENTS PROVIDED 14 JULY 2008

STAKEHOLDER RECIPIENTS

1. AMCI Australia
2. Anglo Coal Australia
3. Austar Coal Mine
4. BHP – Hunter Valley Energy Coal
5. Bloomfield Collieries
6. Centennial Coal
7. Commonwealth Department of Finance & Regulation
8. Commonwealth Department of Infrastructure, Transport & Regional Development
9. Donaldson Coal
10. Felix Resources
11. FreightLiner
12. Genesee & Wyoming
13. Gloucester Coal
14. Hunter Enviro-Mining
15. Hunter Valley Coal Chain Logistics Team
16. Hunter Valley Coal Chain Review (Greiner Review)
17. Idemitsu Australia Resources
18. Integra/Vale Coal
19. Macquarie Generation
20. Newcastle Coal Infrastructure Group (NCIG)
21. Newcastle Ports Corporation
22. NSW Minerals Council

23. NSW Minister for Ports – Joe Tripodi
24. Pacific National
25. Peabody Pacific
26. Port Waratah Coal Services
27. QR National
28. Rail Infrastructure Corporation
29. Rio Tinto Coal Australia
30. Specialised Container Transport
31. Whitehaven Coal
32. Xstrata Coal