AUSTRALIAN RAIL TRACK CORPORATION LTD

HUNTER VALLEY COAL NETWORK ACCESS UNDERTAKING

TRUE UP TEST POSITIVE PERFORMANCE INCENTIVE MECHANISMS

DISCUSSION PAPER

FEBRUARY 2015

ARTC

TABLE OF CONTENTS

TABLE OF ABBREVIATIONS & SPECIAL TERMS

The following abbreviations and special terms are used in this Discussion Paper. Note that these definitions are informal and intended to aid the reader's general comprehension of this document. More precise definitions for the majority of terms are contained within the HVA and or AHA.

ACCC	Australian Competition & Consumer Commission
Access Holder	An entity that has entered into an AHA with ARTC.
ACP	Annual contracted path usages for each Access Holder.
Ad Hoc Charge	A charge for the use of an AHPU that is equivalent to the TOP Charge that would have applied to the train had it been a BPU.
AHA	Access Holder Agreement
AHPU	Ad Hoc path usage – a category of train path usage
Annual Reconciliation	The process set out in AHA clause 5.4 that provides for the payment of any TOP Rebates and Ad Hoc Rebates applicable.
APU	Actual path usages consumed during the year by each Access Holder.
ARTC	Australian Rail Track Corporation
BPU	Base Path Usage – the main element of an Access Holder's entitlement under the AHA
Ceiling	A revenue cap applicable to the constrained part of the Hunter Valley coal network.
HVAU	2011 Hunter Valley Coal Network Access Undertaking (as amended October 2012 and June 2014)
HVCCC	Hunter Valley Coal Chain Coordinator
MTC	Monthly Tolerance Cap
non-safe harbour trade	the trade of a path usage that does not meet the requirements of a safe harbour trade. Non-safe harbour trades require ARTC approval, not to be unreasonably withheld. ARTC will seek the advice of the HVCCC as to the capacity impact of this type of trade prior to approval.
non-TOP	The component of access charges that vary with actual usage of the network.
path usage	Refers to a particular instance of a train path.
Permeable Ceiling	A Ceiling that would allow for ARTC to retain revenue above the economic cost of providing the network under certain circumstances.
Pricing Zone	The HVAU contains three Pricing Zones, these are loosely: Newcastle – Bengalla Bengalla – Ulan Muswellbrook – Turrawan (Narrabri)

Rail Capacity Group or RCG	The RCG is a forum for Access Holder consultation regarding network capital projects. The HVAU provides the RCG with a key role in the endorsement of projects and the determination of capacity requirements under the HVAU.
ROR	The rate of return applicable to the HVAU
safe harbor trade	The trade of a path usages where the seller is further from the port than the buyer, the destination is the same and the capacity impact of the trade is assumed to be neutral or beneficial to ARTC and the coal chain. Subject to certain conditions, these trades do not require ARTC approval.
line segment	A section of the network.
Tolerance	A category of train path usage provided to Access Holders to enhance flexibility.
TOP	Take Or Pay – related to the TOP Charges that are the fixed charges arising under an AHA.
TOP Rebate	A rebate to an Access Holder of a TOP charge resulting from the operation of the TUT and Annual Reconciliation.
train path	A train path is the route of a train of a certain specification between an origin and destination. In the case of coal trains this is extended to include both the empty journey and the loaded return to port. Colloquially, the term train path is often used interchangeably with the term train path usage and for most purposes the distinction is moot.
TUT	True Up Test. The HVAU provides for a monthly and a quarterly version of the TUT. The monthly test applies to the majority of Access Holders. The quarterly version applies to coal producers with relatively small volumes. For the purposes of this paper, it can be assumed (unless the context indicates otherwise) that a reference to the TUT or the monthly TUT will include the quarterly TUT, which is essentially the same except for the period covered.
Unders and Overs	An annual mechanism whereby ARTC either charges Access Holders in the constrained network to recover any under-recovery of the Ceiling or in the case of over-recovery, rebates the excess access revenue to relevant access Holders.
WACC	Weighted average cost of capital

1 EXECUTIVE SUMMARY

1.1 Background

ARTC's Hunter Valley Coal Network Access Undertaking (**HVAU**) contains an obligation at section 13.5 for ARTC to propose a performance incentive scheme related to the operation of the True Up Test (**TUT**) which would generate positive financial outcomes for ARTC. This obligation was included in the HVAU in response to concerns raised by the Australian Competition & Consumer Commission (**ACCC**) that:

- the TUT currently contains only negative incentives for ARTC to perform as this may cause ARTC to adopt a "minimum risk" position particularly in the context of contracting to provide additional capacity; and
- there was a perceived need for a positive incentive for ARTC to provide Ad Hoc paths.

This Discussion Paper considers possibilities relating to the adoption of a positive incentive scheme specifically related to the TUT and proposes a scheme for the consideration of stakeholders. Stakeholders are asked to provide written responses which will then be considered by ARTC., ARTC will::

- review and consolidate feedback as to the support or otherwise from stakeholders for the proposed scheme; and
- make a submission to the ACCC detailing the feedback received and if applicable submit an amendment to the HVAU to the ACCC to incorporate the scheme into the HVAU at this time or otherwise, submit a report to the ACCC detailing the reasons for not submitting an amendment to the HVAU.

The closing date for stakeholder responses is 20th March 2015. See 2.2 below for further details.

1.2 Considerations In Developing A Positive Performance Incentive Scheme

There are a number of matters that could influence the viability of an incentive scheme related to the TUT, some common to all such schemes, and some that are dependent on the specific circumstances of the HVAU and the Hunter Valley coal chain. In particular, in relation to the specific circumstances:

- The HVAU provides for revenues to be capped through a Ceiling. This is a factor that any positive financial incentive will need to deal with if it is to be effective, either by raising the Ceiling or by providing a mechanism to selectively allow for the Ceiling to be circumvented where the circumstances warrant. One way to achieve this is to provide for revenues generated through the operation of the incentive scheme to be excluded from the Ceiling calculation.
- The existing TUT and Annual Reconciliation processes provide incentives in one way or another. Any scheme proposed should take these into account.

- To be successful, the performance incentive mechanism will need to address matters that are within ARTC's control within the context of the Hunter Valley where there are strong interdependencies between Access Holders, co-service providers and ARTC.

1.3 The Proposed Scheme

In formulating a scheme of positive performance incentives, the focus is on the two elements identified by the ACCC as concerns that should be addressed; i.e. the incentive to contract less conservatively and to provide Ad Hoc path usages (**AHPU**s). The paper gives consideration to how these ends might be achieved.

ARTC is cognisant that significant protections to Access Holders were established through the extensive consultation and endorsement processes contained within the HVAU. Whilst the TUT holds some limitations as to how to facilitate a mechanism to promote the contracting of additional train paths, existing mechanisms within the HVAU do prevent the major negative aspect to under-contracting, i.e. the need to build excess infrastructure.

In considering how to incentivise the provision of AHPUs, ARTC is proposing a scheme that would retain the existing arrangements that include AHPUs in the path usages counted towards fulfilling ARTC's obligation to an Access Holder, with the rebate of any Access Charges where their retention would result in double charging. To this, it is proposed to add a mechanism whereby ARTC would be allowed to retain Ad Hoc Charge revenue where it has passed the TUT for the relevant quarter year, after rebating any Ad Hoc Charges applicable under the existing provisions. Any resulting revenue would not be included in the Ceiling revenue calculation.

While this mechanism has the potential to provide some benefit to ARTC, stakeholders are encouraged to consider the balance between this and maintaining a continuing incentive for ARTC to proactively utilise and administer trades to ensure Access Holder needs are also met.

Section 7 of this Discussion Paper raises a series of questions to guide stakeholders in their responses.

2 INTRODUCTION

2.1 Purpose

The purpose of this Discussion Paper is to identify opportunities for introducing positive performance incentives relating to the TUT contained within ARTC's HVAU. The paper seeks stakeholder comments prior to ARTC's consideration of an amendment to the HVAU to incorporate an incentive scheme that has broad stakeholder support.

2.2 Stakeholder Responses

Stakeholders are invited to comment on any aspect relating to positive financial performance incentives under the TUT. In order to assist stakeholders, specific questions are raised in section 7. However, the questions are provided as a guide only and stakeholders are free to consider any relevant matter.

Written responses are requested to be provided to Wayne Johnson, General Manager Customer Service & Operations Hunter Valley by email at WJohnson@ARTC.com.au. Responses should be submitted by close of business, Friday 20th March 2015.

ARTC intends to publish any stakeholder responses on its website and include them in a report to the ACCC unless they are marked confidential. Respondents are requested to identify whether or not their submissions may be published and/or provided to the ACCC. Stakeholders are encouraged to make their submissions non-confidential in the interests of furthering the exchange of views amongst all Hunter Valley coal chain participants.

2.3 ARTC Hunter Valley Access Undertaking

The HVAU was approved by the ACCC on 23 June 2011 and came into operation on 1 July 2011. Subsequently, the HVAU has been amended in October 2012 and June 2014, this latter being the current version at the time of writing. A copy of the current version of the HVAU is available from the ARTC website at http://www.artc.com.au/library/ARTC%202014%20HVAU.pdf. References to the HVAU within this document are references to the June 2014 version of the HVAU.

The HVAU sets out the framework within which access will be provided to the Hunter Valley coal rail network. This includes a variety of processes including:

- negotiation for access to the network, including a dispute resolution process;
- setting limits to revenue and pricing differentiation;
- identifying how capacity will be managed;
- a capital consultation process and a process for user funding of capital projects; and
- arrangements for the annual assessment of ARTC's compliance with the undertaking.

The HVAU also provides a template for the contractual arrangements that will apply to access by coal trains in the form of the Indicative Access Holder Agreement (**AHA**), which forms Annexure A to the HVAU. The AHA contains a number of areas that are able to be negotiated by Access Holders but also there are a number of provisions that are required to be common across all AHAs due to the interrelatedness of a number of matters relating to access to rail network. The AHA is available from the ARTC website at http://www.artc.com.au/Content.aspx?p=225. The TUT and Annual Reconciliation are both processes that are required to be common across all AHAs. (See HVAU section 3.14 and Schedule A:1 for further details regarding mandatory AHA provisions.)

2.4 Terminology

The HVAU and AHA are extensive documents that incorporate a range of specific terms. In many instances, it is important to comprehend the use of specific terms in the formal context of the HVAU and as such a table of abbreviations and special terms used in this document, along with informal definitions, is provided at page 3.

In order to aid readability, similar but more general terms are used in this paper where the precise HVAU meaning is not critical for understanding.

2.5 The True Up Test

The majority of traffic using the HVAU network is coal traffic and many of the provisions within the HVAU are directed specifically towards managing the provision of access within an environment where there are strong interdependencies between the various network users, particularly between different coal traffics and also between the coal traffics and the various related service providers (i.e. track owners, train operators, load-point operators and coal terminal operators). Coupled with this, the manner in which the Hunter Valley coal chain operates means that individual Access Holders will experience a degree of variability in demand for access to the network – this variability arises due to both to their own circumstances, those of other Access Holders and the availability of resources from various co-service providers. This interdependency means that it is not appropriate to measure ARTC's performance against individual contractual obligations by measuring delivery of contracted path usages to individual Access Holders as would usually apply under more loosely coupled systems. For example, the fact that Coal Producer A did not operate its contracted path usages in the month may be due to a variety of circumstances, such as:

- no ship in the shipping stem (i.e. effectively no demand from the Access Holder) meaning that no cargo can be assembled and no path usages are required;
- unavailability of coal or load-point;
- unavailability of a stockpile at the port coal terminal;
- unavailability of trains;
- ARTC's non-provision of train paths; or
- unavailability of paths on an adjacent network that are required to complete the journey.

It is in this context that the HVAU provides for the conduct of the monthly TUT.[1] The TUT tests whether ARTC has made available sufficient train paths to meet its contractual obligations to all Access Holders as a group within each Pricing Zone. If not, the TUT provides for the accrual of a rebate of Take Or Pay (**TOP**) Charges to individual Access Holders that have suffered a shortfall in capacity provided during the period.

The TUT is specified in AHA Schedule 2.

2.6 Annual Reconciliation

The rebates accrued throughout the year by each Access Holder due to a shortfall in the provision of network capacity, as measured by the TUT, are paid at the completion of the contract year (which runs January to December) in the event (and to the extent) that the Access Holder has not been provided with its contracted entitlement across the whole year, i.e. its annual contracted paths (**APU**). This is determined through the Annual Reconciliation, which is a process separate from, but dependent upon, the TUT. In considering any performance incentives relating to the TUT, it will most likely be necessary to consider the effect on the Annual Reconciliation. For the purposes of this paper, the Annual Reconciliation is assumed to be an integral part of the TUT mechanism except where the context indicates otherwise.

The Annual Reconciliation is set out in AHA clause 5.4. This provides for the payment of accrued TOP Rebates in certain circumstances and also for the rebate of Ad Hoc Charges where this would otherwise result in the double payment for a path usage.

2.7 HVAU Clause 13.5 Obligation

During the HVAU approval process, the ACCC commented that stakeholders were supportive of a positive (reward) focused incentive mechanism to balance the penalty-based system that was included in the HVAU in the interest of improving outcomes for the coal supply chain. The ACCC accepted the HVAU without such mechanism initially, provided relevant incentive schemes would be progressed with stakeholders in a consultative manner with the aim of inclusion through amendments if required.[2]

As a result, section 13.5 of the HVAU includes a requirement for ARTC to:

"prepare and publish on its website options for a proposed performance incentive scheme which has the objectives of encouraging ARTC, through financial reward, to improve its performance in relation to making Capacity available for use either on a contracted or ad hoc basis and balancing the negative consequences of failing the system wide TUT, to be included in the Undertaking; and"

"invite submissions from Access Holders and other stakeholders on the proposed TUT-related performance incentive scheme …"[3]

---

1 The HVAU also provides for a quarterly version of the TUT. For further explanation see the definition of TUT on page 4.

2 ACCC, Consultation Paper In Relation To Australian Rail Track Corporation's Application To Vary The Hunter Valley Access Undertaking – Non-TUT-Related Performance Incentive Mechanism, 4 September 2012, p.5

3 HVAU section 13.5(a)(i) and (ii)

That obligation was to be carried out either in parallel with, or subsequent to, a review of the operation of the TUT. Given the potential for the TUT review to result in changes to the TUT, ARTC decided to complete the TUT review prior to consulting with stakeholders regarding a TUT related performance incentive scheme.

ARTC completed the TUT review in September 2014 and the resulting report found that, apart from some minor reporting modifications, there were no significant issues that required modification to the TUT at the time.[4]

ARTC is now in a position to provide this Discussion Paper to stakeholders to consider a positive performance incentive scheme related to the TUT. It is intended to provide the opportunity for stakeholder input into the process as contemplated in HVAU section 13.5(a)(ii).

Subsequent to the receipt of stakeholder submissions, ARTC is required to:

"… in good faith consider the submissions provided … and prepare a report addressing options for a proposed TUT-related performance incentive scheme having regard to the submissions and containing ARTC's proposed variation to the Undertaking to include its TUT-related proposed performance incentive scheme and:

(i) provide that report to the ACCC; and

(ii) may lodge a variation application with the ACCC under section 44ZZA(7) of the CCA consistent with the report, or if it chooses not to, will set out in the report reasons why it is not submitting a variation …"

The timing of this obligation is set out in HVAU section 13.5(c):

"If ARTC decides to conduct the development of a TUT-related ARTC performance scheme after completion of the TUT Review, ARTC will complete development of a TUT-related ARTC performance scheme within 6 months of the completion of the TUT Review or such longer period as required to consider or address any variations that may be proposed or required by the ACCC."

3 CONSIDERATIONS FOR A PERFORMANCE INCENTIVE SCHEME

ARTC considers that the development of a financially based performance incentive mechanism relating to the operation of the TUT, should have regard to the following considerations:

- the specific regulatory circumstances applying to the Hunter Valley rail network;
- the objective of a performance incentive mechanism;
- the success factors inherent in a performance incentive mechanism;
- any specific circumstances that may affect the mechanism.

Each of these factors is discussed in turn in this section.

[4] A copy of the TUT Review report is available on ARTC's website at: http://www.artc.com.au/Content.aspx?p=307

3.1 Specific Regulatory Circumstances Proposed For The Hunter Valley.

3.1.1 Application of the revenue ceiling limit

The HVAU imposes a limit on the maximum revenue that ARTC may receive for certain parts of the network under certain conditions (the “Ceiling”). Where pricing is constrained in the Hunter Valley (currently in Pricing Zones 1 and 2), the Ceiling revenue available to ARTC varies with the efficient costs required to be incurred by ARTC in order to provide the network services. This means that where ARTC is able to reduce operating costs in any year, any benefit is passed on to Access Holders through a reduction in access pricing.

Further, to the extent that ARTC can deliver capacity to the system without investment (or avoid investment that might otherwise be required) through improved capacity management or use of technology to increase utilisation, any benefit is, once again, passed on to Access Holders. This will be in the form of lower prices than would otherwise have been the case had the investment been added to the asset base. As such, the application of a Ceiling, where pricing is constrained, serves to reduce or remove ARTC’s incentive to actively seek out innovation notwithstanding that ARTC must price on the basis of efficient costs.[5]

However, this does not mean that ARTC is without an incentive to perform. ARTC has a strong incentive to deliver services efficiently as any costs incurred that are inefficient may not be recovered under the Ceiling (i.e. the Ceiling would reduce to the extent that costs are inefficient).

3.1.2 Incentives arising through existing regulatory and commercial obligations under the HVAU.

The HVAU and the associated AHA are designed to drive ARTC towards desirable behaviour in any event. For example, a breach of any provisions in the HVAU gives rise to an ability of an applicant or Access Holder to seek some form of remedy through the provisions of the HVAU itself, or through regulatory or court intervention and enforcement. This clearly places negative incentives for ARTC not to act in a manner contradictory to the HVAU. There are also some other explicit mechanisms provided in the HVAU intended to financially incentivise ARTC to deliver on contracted entitlements. These include:

- incentive, by way of unrecoverable financing charges, to deliver investments on time;
- incentive, by way of prudency assessment, to manage and deliver capital projects prudently within approved cost limits; and
- incentive, by way of the application of the TUT each month, to provide path usages sufficient to meet the contractual entitlements of all coal Access Holders, including Base Path Usages (**BPU**s) and the Monthly Tolerance Cap (**MTC**)[6] within each Pricing Zone.

---

5 The requirement to operate at efficient costs presents a dilemma in that what is considered efficient will necessarily be evaluated against the available alternatives. Therefore, in circumstances where the firm is operating at best practice and has a revenue Ceiling, while the firm has an incentive to maintain best practice, it is contrary to the firm’s interest to actively seek to improve on existing best practise. This issue is addressed in ARTC’s complementary paper regarding non-TUT positive incentives.

6 Note that MTC represents the maximum Tolerance path usages that may be assigned in a Pricing Zone (the number may differ between Pricing Zones), and therefore is the appropriate measure, not an individual Access Holder’s Tolerance

The TUT also incentivises ARTC to deliver contracted BPUs to each Access Holder in each period.

Each of these mechanisms is negative and asymmetric, where ARTC is penalised if it fails through the exclusion of revenue from the Ceiling, without any corresponding positive incentive when ARTC achieves a better outcome than required.

The most wide-reaching of these mechanisms is the TUT. Failure by ARTC to perform in a number of areas including:

- exceeding planned maintenance outages;
- over-contracting scheduled train path usages to coal or non-coal;
- selling Ad Hoc capacity to coal or non-coal at the risk of not delivering contracted capacity; or
- not meeting track related System Assumptions due to under-maintaining the network;

can all result in failure to satisfy the TUT, with negative financial consequences.

3.2 Objective Of A Performance Incentive Mechanism

In the circumstances of a regulated monopoly service provider, the objective of a performance incentive scheme is two-fold:

- to ensure that the firm does not exercise market power through reducing performance in order to increase profits; and
- to encourage desired performance where this is not sufficiently incentivised through the pricing mechanism.

3.2.1 Role of an incentive mechanism to prevent inappropriate profit

As noted earlier, the HVAU contains a Ceiling in the form of a revenue cap (where pricing is constrained) that limits revenues to the economic cost of providing the service. The Ceiling, by its very nature, serves to cap the profits available to ARTC that might arise through reduced performance (i.e. with expectation of saving costs) and cost reductions.

It is recognised that some regulatory structures can allow profits to increase where the Ceiling is tied to specific performance levels and resulting benchmark costs; for example where a price cap is used. However, in the context of a performance incentive scheme directed solely at the TUT (and Annual Reconciliation) as envisaged under HVAU section 13.5, it must be assumed that the general pricing mechanism is not intended to be modified, i.e. it is not within the scope of this exercise to consider the adoption of a price cap as opposed to the current revenue cap.

Notwithstanding this, it would seem essential for the success of a financially based positive performance incentive to deliver a positive financial outcome. This must include the ability to earn above the Ceiling (as it is currently constituted), otherwise it is hard to see how an incentive can

allowance which, in aggregate is likely to exceed MTC. Any path usages above an individual Access Holder's Tolerance allowance or MTC (for the relevant Pricing Zone) would be AHPUs, unless there are traded paths involved.

arise. However, in doing so it will be important to take into account the protections to Access Holders against ARTC earning excess profits that the Ceiling was intended to provide.

3.2.2 Where performance is not sufficiently incentivised through the pricing mechanism

In circumstances where the pricing/revenue structure either fails to provide incentives to encourage the efficient delivery of services, or the signals to do so are muted or distorted in some way, then performance incentives may offer a useful alternative. As already noted, the HVAU includes some financial performance incentives, but these are all negative and asymmetrical. As noted above, a difficulty arises under a revenue cap Ceiling that, by its nature, the Ceiling prevents the achievement of superior revenue outcomes. Therefore, again, any performance incentives with positive revenue outcomes would need to appropriately address this constraint.

3.3 Success Factors Inherent In A Performance Incentive Mechanism

The success of a performance incentive mechanism often relies on a number of key factors including:

- focus on those elements of performance most valued by users;
- clear description of the performance level required;
- performance indicators that are both meaningful (i.e. relate directly to the desired behaviours) and measurable;
- the appropriateness of any financial implication compared to the impact of success or failure; and
- performance must largely be within the control of the party being incentivised.

3.4 Specific Circumstances That May Affect The Mechanism

In designing a performance measure or selecting success criteria it is important that any specific circumstances that may impact on the measure are understood. Failure to correctly reflect the circumstances in the design may lead to the measure failing to provide the desired incentive, or worse, may encourage undesirable behaviours.

As an example of such a circumstance, the TUT currently encourages ARTC to align contracting of network capacity to system capabilities or take a conservative approach to the contracting of this capacity. In some ways this is a good thing as it would be contrary to the interests of the coal chain as a whole to over-contract available capacity. However, without a counterbalancing positive incentive, a conservative approach to contracting capacity has the potential to result in higher costs to coal producers than might otherwise be the case. In this context it should be noted that there are several other mechanisms at play which complicate the measurement of capacity available for contracting, not the least of which is the fact that ARTC needs to take into account coal chain capacity which is a separate measure determined by the HVCCC, as well as the capacity of the rail network, when it contracts additional capacity. Further, the HVAU requires applicants for access to consult with the HVCCC regarding the availability of coal chain capacity. Therefore, while the impact of a mechanism involving the TUT (and hence ARTC's financial outcomes) is likely to influence ARTC's contracting behaviour, the impact will be modified by these other influences that take no account of the TUT at all.

A further consideration is the level of interdependency between service provider, co-service providers and service consumer. This interdependency, as discussed above, is substantial. Therefore, the practical effect of ARTC performance (good or bad) and leadership in the improvement in the performance of the wider coal chain is often uncertain, at least in the short term and this has implications for how ARTC should be rewarded. For example, if ARTC makes additional capacity available but there is insufficient capacity in another element of the coal chain to allow use to be made of that capacity, how should this be treated? This interdependency potentially adds complexity to the design and measurement of any TUT related incentive, which in turn may affect the effectiveness of the measure to promote desired outcomes, unless the measure is related solely to ARTC performance irrespective of the practical benefit delivered.

4 SETTING THE CONTEXT

4.1 What Can Be Addressed

Prior to setting out a proposal for a financially based positive incentive scheme, it is appropriate to consider what might be achievable.

The ACCC has identified two areas where it believes that a positive incentive is required to balance the existing negative incentives and that these could be achieved in some way through the TUT:

- encouragement to increase network utilisation by contracting for more capacity, rather than less; and
- encouragement to utilise spare capacity by providing Ad Hoc paths, where possible.

The remaining sub-sections in this section 4 consider how these might be addressed.

4.2 Incentives To Prevent Under-Contracting

The Ceiling is asymmetrical - ARTC can earn less than the Ceiling,[7] but when it earns revenue above the Ceiling it cannot retain the excess. Unless this concept is modified, it is not possible to provide an effective positive financial performance incentive within the Ceiling itself except for a mechanism that mitigated the negative incentives (i.e. that would counterbalance a reduction of revenue below the Ceiling and restore earning up to a maximum of the Ceiling). Such an incentive would only have effect in circumstances where ARTC has failed the TUT and hence is unlikely to be effective.[8] Therefore, ARTC believes that it would only be possible to have an effective positive

---

[7] Technically, the Ceiling can be reduced as a result of the operation of the TUT – however, in less precise but probably more meaningful terms, this is can be described as "earning below the Ceiling", in the context where the "Ceiling" is the economic cost of providing the relevant part of the network. This more relaxed terminology makes it rather less confusing to discuss changes to the Ceiling and this terminology is used in this section notwithstanding that technically it would require that the Ceiling is either raised or lowered.

[8] To date, ARTC has not failed the TUT in any Pricing Zone since reporting commenced in February 2012.

financial incentive if ARTC is permitted to retain revenue above the nominal Ceiling or else the revenue relating to the performance incentive is excluded from the Ceiling limit.

ARTC's risk of failing the TUT increases with an increase in contracted capacity for any given level of rail infrastructure, but there is no compensating up-side that would encourage ARTC to contract at a higher level. The ACCC has identified this risk as creating an incentive to under contract (a long term effect).

A further point to consider is that a willingness to contract does not, by itself, necessarily translate into higher rates of network utilisation. It not only requires a corresponding increase in demand but also a corresponding availability of other elements of the coal chain. Therefore, the effectiveness of an incentive to contract more aggressively will always be driven, at least partly, by factors beyond ARTC's control. A similar point applies to making AHPUs available. To be effective, the path usages made available require appropriate demand to be consumed, i.e. train paths are both geographically and temporally specific and the demand must be in the right place at the right time in order to use them. Again this introduces elements that are out of ARTC's control.

Given the nature of the current Ceiling, three alternative avenues present themselves to introduce positive financial incentives:

- Option 1: Increase the permitted rate of return (**ROR**) to recognise an increased risk, i.e. raise the Ceiling ex-ante.
- Option 2: Modify the Ceiling concept (i.e. introduce a Permeable Ceiling) to allow ARTC to retain revenue above the cap in some circumstances, i.e. raise the Ceiling ex-poste based on achievement of desired criteria.
- Option 3: Leave the Ceiling as it is currently constituted but allow for revenue resulting from operation of the positive performance incentives to be retained outside of the Ceiling.

These are discussed below.

4.2.1 Option 1: Increase the permitted ROR

This option has little to do with the TUT in its current form as the ROR is determined completely outside of the TUT, and the TUT has no direct impact on the ROR. Notwithstanding this, increasing the ROR to encourage contracting for higher volumes is a possibility and the impact of higher returns and higher contracting rates would flow through the TUT and Annual Reconciliation.

Unfortunately, this option presents substantial difficulties:

- Determination of the appropriate 'base-line' contractual position associated with the approved ROR. Determination of the ROR itself already involves considerable issues regarding the estimation of weighted average cost of capital (**WACC**), and the determination of a base-line capacity would require the adoption of substantial additional assumptions.

  It is noted that the TUT is a Pricing Zone based test and adoption of an ROR based incentive would apply across the whole of the network equally. In this regard it is noted that ARTC originally intended to apply RORs specifically to each Pricing Zone in early drafts of the HVAU but this was abandoned for a number of reasons.

- How to measure the incremental risk and reward compared to the base-line.
- How to modify the Undertaking to give effect to these differential contracting outcomes.

To be effective, an incentive must be capable of reasonable translation into action, and the requisite actions must be executable by the party to whom the incentive is directed. The measurement issues associated with this option do not meet these requirements.

4.2.2 Option 2: Modify the revenue cap concept to a Permeable Ceiling

This option determines the outcome after the actual making available (or not) of train paths. Effectively this introduces a variable ROR. The Ceiling, and therefore the targeted ROR would be determined using WACC against a base level of demand (i.e. determining appropriate level of risk) and allowing additional reward for contracting above this. If ARTC fails to provide the additional ACP, this would lower the possible ROR available (as an impact of the TUT), so it has some appeal both ways. But, again it is necessary to determine a base level, then allow ARTC to keep a proportion of revenues for additional paths contracted or value contributed; therefore, the measurement issues associated with setting a higher ROR ex-ante impact on this option as well, and for the same reasons this option is probably unsuitable as far as contracting is concerned.

4.2.3 Option 3: Exclude Revenues From The Ceiling

As it is currently constituted, the Ceiling is calculated as the economic cost of providing the network required by a group of Access Holders.[9] However, it would not be overly difficult to modify the HVAU to allow for revenue earned through the operation of a positive performance incentive mechanism to be excluded from revenue that is matched against the Ceiling. This would not require modification to the Ceiling itself, merely identification of the revenues that would be excluded.

4.2.4 Other Incentives

The key point of incentivising ARTC to contract more rather than less is to prevent ARTC from over investing (i.e. producing more capacity than is required in order to ensure it passes the TUT). In this context, ARTC is already rewarded for investing in “hard” assets as this increases the asset base on which the return is calculated.[10] Counterbalancing this incentive to invest, the Rail Capacity Group mechanism is directed towards a rigorous investment evaluation process culminating in contracting for a defined level of capacity and building to provide that capacity. The incentive to prevent ARTC over-building (and therefore under-contracting) lies in the endorsement process in HVAU sections 7 to 10, not the TUT. In addition, over-building capacity exposes ARTC to greater risk of, and impact from, asset stranding into the future. Notwithstanding that the existing contractual framework is for a rolling 10 year term, any investment in the network will have a payback period substantially longer than this, so stranding risk remains a real concern.

Therefore, as far as dealing with the long term issue, there are other mechanisms better suited and already in place to encourage ARTC to contract to an appropriate level. In practice, as the issues

---

[9] The Ceiling is actually calculated through a combinatorial model and there are many possible ceiling limits that might apply given different combinations of traffics; but there will be a single Ceiling that is relevant for the combination of traffics and line segments that generates the highest revenue within a given network cost.

[10] It is noted that there is little incentive for ARTC to invest in “soft” assets as these are often not amenable to inclusion in the asset base and therefore only direct expenditure can be recouped.

identified with the above options demonstrate, there is also little opportunity to use the TUT effectively to achieve this outcome.

4.3 Incentives To Provide Ad Hoc Paths

AHPUs are provided in the short term within the contract year and ARTC has discretion whether to provide them or not. ARTC's risk of failing the TUT increases whenever ARTC provides AHPUs while there remains any unfulfilled BPU allocations.[11] As it is almost certain (given the existence of quarterly allocations and the variability of shipping) that there will always be some unfulfilled BPU allocations at any given point in time, this increased risk is a disincentive to provide AHPUs. Unlike the contracting of additional train path usages, this is a short term effect.

AHPUs attract a charge equivalent to the TOP Charge for a single corresponding contracted train path usage. However, the additional revenue is included in the Ceiling cap. Thus, any additional revenue earned by ARTC above the Ceiling would be returned to Access Holders through the Unders and Overs process. Therefore, under the TUT and the existing Ceiling, there is no upside to balance the increased risk.

Further, it is usually the case that neither ARTC nor the Access Holder will have certainty as to the category of train path usages on any given day prior to the finalisation of the categorisation process after the close of each month. This is because of at least two factors:

- The use of Tolerance is subject to the MTC for each Pricing Zone. Therefore, the use of a train path that is expected to be Tolerance for an Access Holder (i.e. the Access Holder has consumed its BPU allocation for the month) may or may not be Tolerance when all Tolerance path usages have been taken into account because the MTC might have already been reached in the relevant Pricing Zone.
- An Access Holder may trade within a month and trades may act retrospectively as well as prospectively within the month. Therefore, even if a path usage would have otherwise been a Tolerance path usage, it may become a traded path usage acquired from another Access Holder (or traded within the Access Holder's own portfolio) once all path usages are reconciled for the month. In turn, this may impact the categorisation of other path usages, including those of other Access Holders, if this impacts on the number of Tolerance path usages compared to the MTC.

Therefore, it is not as simple as providing an incentive to ARTC to provide AHPUs that would yield an immediately discernible increase in AHPUs being available. However, notwithstanding this, it is the case that it would encourage ARTC to make AHPUs available where there is an explicit demand (it has been the case that such requests have been made from time to time) and this incentive could offset the increased risk of failing the TUT. As an example, several Access Holders have AHAs with ARTC with zero BPUs and these Access Holders rely on AHPUs being made available on request.

[11] BPUs represent the primary contractual obligation to provide train path usages within the month. Each Access Holder has an entitlement to BPUs and may then access Tolerance path usages under certain circumstances and finally may request AHPUs when these other avenues are exhausted. An Access Holder may also trade path usages to acquire additional capacity.

4.3.1 Rebate of Ad Hoc path charge up to Annual Contracted Path Usages

The Annual Reconciliation process (AHA clause 5.4) provides for a rebating of Ad Hoc Charges where the Access Holder has not otherwise utilised all of its ACP, while at the same time recognising the AHPUs as actual path usages (**APU**) which contribute towards the Access Holder's ACP. In this context, notwithstanding that revenue above Ceiling must be returned, this provision does provide ARTC with some incentive to provide this type of train path usage through allowing ARTC to reduce any under-provision of ACP to an Access Holder and hence protect itself better against having to provide a TOP Rebate in the event of a prior failure of the TUT during the year.

It is ARTC's intention that this mechanism would be retained in any amendment to the HVAU to incorporate a positive incentive scheme.

4.3.2 Allow ARTC to retain Ad Hoc charges beyond ACP

If ARTC is allowed to retain Ad Hoc Charges (i.e. exclude these revenues from the Ceiling calculation) for AHPUs made available beyond "aggregate ACP" (i.e. the sum of ACPs for all Access Holders) this would provide a positive performance incentive to provide AHPUs.

AHPUs and the associated Ad Hoc Charges are readily identifiable from ARTC's billing processes and the Annual Reconciliation process already tests whether an individual Access Holder's ACP has been achieved or surpassed by its APU. The exclusion of the revenues from the operation of the Ceiling would not require any adjustment to the Ceiling per se, i.e. access related revenues would still be measured against the economic cost to provide the constrained network; it would merely require identification and exclusion of the relevant revenues. Therefore, no measurement issues such as those discussed in 4.2.1 above arise.

However, it would be necessary to protect an individual Access Holder from being disadvantaged in the case where ARTC meets the aggregate ACPs but does not make available[12] an individual's ACP (for this to arise, ARTC must have at some point during the year failed the TUT). This can be achieved by restricting the availability of above (or excluded) Ceiling revenues to only when ARTC has passed the TUT. Obviously, the option would lose its incentive effect if this limitation applied to <u>any</u> failure of the TUT across the year.

As an example, if this limitation applied and ARTC failed the TUT in January, then it would have no incentive to provide AHPUs for the whole year with the exception of providing AHPUs to an individual Access Holder that had accrued a rebate as a result of the TUT failure. Indeed, in that circumstance ARTC would have a disincentive to provide AHPUs for the rest of the year to other Access Holders (i.e. those that had not accrued a rebate).

At the other extreme, quarantining the impact to only the month in which the TUT was failed may be seen as too generous. Therefore, to ensure that the incentive remains and the qualification is proportionate, ARTC's proposal is that the effect of a TUT failure should be applied quarterly. This way it includes the quarterly TUT as well as covering 3 independent monthly TUTs and avoids any potential ambiguities that might arise in a case where ARTC fails a quarterly but not the

[12] For clarity, there is a difference between whether ARTC has made path usages available (which is measured in the TUT) and the actual use of the available paths by an Access Holder. The need for protection being suggested here only arises where ARTC has not made the path usages available. ARTC is not obliged to compensate an Access Holder where available paths were not used.

corresponding monthly TUTs (or vice versa). ARTC believes that this provides an appropriate balance between maintaining the effectiveness of the incentive while recognising that ARTC should not be rewarded while failing to perform.

4.3.3 Potential Consequences

The provision of train path usages under the HVAU is complex. Adopting an incentive in relation to one aspect of the HVAU has the potential to influence the incentives applying to other areas. These are not necessarily obvious or predictable. One area that the adoption of an incentive to provide AHPUs may impact is trading.[13]

Under the AHA, trading is available under two conditions:

- safe harbor trade – a trade where the seller is further from the port than the buyer and the destination and train specification must be the same. The capacity impact of the trade is assumed to be neutral or beneficial to ARTC and the coal chain. Subject to certain conditions, such a trade does not require ARTC approval.
- non-safe harbor trade - a trade that is not a safe harbor trade. ARTC approval is required but this may not unreasonably be withheld if the HVCCC advises that the trade will not have an adverse capacity impact.

The adoption of an incentive to provide AHPUs could not impact ARTC's provision of safe harbour trades as these do not require ARTC approval. Therefore it is only necessary to consider non-safe harbour trades.

Under current circumstances, ARTC sees trading as commercially neutral, i.e. ARTC neither receives a commercial benefit, nor is ARTC's risk substantially increased by approving a non-safe harbour trade – such a trade only takes place if the HVCCC has advised that the trade will not have a negative capacity impact.[14] The current provisions of the AHA provide a safeguard to Access Holders that if they request a trade; provided the HVCCC advice is in support of the trade, then ARTC has an obligation to not unreasonably withhold its consent. However, in the interests of customer service, ARTC's current practice goes beyond this, whereby ARTC often encourages Access Holders to trade when it would be to their advantage, i.e. when they might otherwise incur Ad Hoc Charges. A financial incentive to provide AHPUs could have the effect of giving ARTC a commercial incentive not to encourage trades and instead to passively allow Access Holders to get into a position where ARTC benefitted from the provision of AHPUs, i.e. it is not that the incentive would remove ARTC's obligation to not unreasonably withhold approval of trades but ARTC would now have a commercial incentive not to actively assist Access Holders to avoid AHPUs through trading.

---

[13] In the context of this paper, trading refers to the temporary trades covered by AHA clause 16.4.

[14] Some risk remains to ARTC in the event of unexpected disruption to the network, or the HVCCC assessment is in error.

5 ARTC'S PROPOSED SCHEME

ARTC proposes the following scheme for stakeholder consideration. This includes the current incentive structure incorporated in the AHA as well as a new provision. The existing positive incentive is to be retained, namely:

- AHPUs will continue to count towards the APU that are used to compare against ACP in the Annual Reconciliation.
- Ad Hoc Charges will continue to be rebated annually to the Access Holder up to the point they contribute to the fulfilment of ACP (i.e. to the extent that AHPUs + BPUs ≤ ACP). This avoids:
  - double charging - as the Access Holder has already paid the fixed component of access charges for all paths up to ACP via the TOP charge; and
  - reduces the amount of any potential redistribution in the Unders and Overs process, so that the party paying the charge is rebated directly.

These first two elements are already included in the AHA as part of the Annual Reconciliation process under AHA clause 5.4. To these, ARTC is proposing to add:

- A pool of funds comprising the Ad Hoc Charges received in each Pricing Zone for each quarter from each Access Holder, load point combination, would be available to ARTC at the end of the year if the criteria are met.
- From each pool, an amount would be deducted to account for Ad Hoc Charges rebated to Access Holders at the end of the year under clause 5.4(b) of the AHA. The amount of the reduction for each quarter would be proportional to the AHPUs in each quarter for each relevant Access Holder, load point combination for the relevant Pricing Zone.
- ARTC would be eligible to retain the adjusted pool available in that Pricing Zone for each quarter that it passes all of the TUTs for that quarter in the Pricing Zone (i.e. the 3 monthly TUTs and 1 quarterly TUT).
- The retention of funds from this scheme would be achieved through the exclusion of the revenues from revenues limited by the Ceiling.

The outcome of the proposed approach is that ARTC's incentives to make contracted capacity available as provided under the TUT are reinforced through the creation of a positive performance incentive; passing the TUT (which is based on ARTC making available sufficient path usages to meet the aggregate BPUs and other pathing obligations for the month) acts as a key to unlock access to additional revenue obtained through selling AHPUs. In the same way, the proposed approach also incentivises ARTC to sell AHPUs.

In reviewing this proposed scheme it is sought that stakeholders consider whether it may affect other aspects of the operation of the Hunter Valley coal chain, e.g. whether it would have any impact (positive or negative) on the way in which trading would work.

6 AN ALTERNATIVE APPROACH

In stakeholder consultation during the approval stage of the HVAU, an alternative approach was proposed whereby recovery of revenue from AHPUs would be limited to an amount equivalent to the non-TOP component plus 50-75% of the TOP component. This formulation was provided prior to the finalisation of the HVAU and the charging for AHPUs has moved on somewhat since then, in particular, the floor limit contained in the HVAU would require the payment of the non-TOP charge under any circumstance. However, the alternative proposal can be characterised as follows:

- ARTC would be permitted to retain 50%-75% of the Ad Hoc Charge.
- Recovery of Ad Hoc Charges in relation to an Access Holder would only apply where that Access Holder had received all BPU and Tolerance in a given month and, in a given year, has received all BPU. This was argued to ensure that the supply of BPUs and Tolerance remained first priority.

ARTC makes the following comments in relation to this approach:

- The underlying premise of this approach is that limiting the recovery of the Ad Hoc Charge to 50-75% would prioritise the supply of BPU and Tolerance. It is this disincentive to make AHPUs available that an incentive mechanism is seeking to address in the first place. ARTC queries why there is a need for further prioritisation of BPU and Tolerance under such an incentive mechanism. The TUT itself incentivises ARTC to make available BPU and the MTC in each period. Failure to do so may result in a TOP Rebate. There would be no net gain to ARTC in making an AHPU available at the expense of a BPU or the MTC. Indeed, due to the tests ARTC is required to satisfy during the Annual Reconciliation in order to recover any Ad Hoc Charges, such recovery of these Ad Hoc Charges is uncertain in any event.
- Limiting recovery of relevant Ad Hoc Charges to where the Access Holder receives all BPU and Tolerance in a given month, and receives all BPU in a given year appears to misunderstand ARTC's contractual commitment and how path usages are identified. ARTC's commitment is to make available sufficient capacity for all BPU in a given period to be used, as well as the MTC. MTC in a Pricing Zone is almost inevitably less than the sum of the individual Access Holder Tolerance allowances – it was never contemplated that MTC should be so large as to provide for all Access Holders to use all of their Tolerance in one month – to do so would require a substantial investment in redundant capacity, noting also that there would be insufficient resources available (stockpiles, trains etc.) to deliver that level of additional capacity to the coal chain. To provide context, in 2015, the MTC is set at 10% of the aggregate of ACP but the sum of individual Tolerance path usage entitlements represents between 13% and 15% of BPUs for individual months.
- The allocation of Tolerance is on a first come, first served basis, and the assignment of stockpiles at port and the resulting cargo assembly and demand for path usages by an individual Access Holder are all managed through the centralised planning process conducted by the HVCCC. There is no opportunity for ARTC to manage the allocation of BPUs and Tolerance in any meaningful way as appears to be contemplated in the suggested course without interrupting that centralised planning process and could be contrary to the interests of the coal chain as a whole.

- Further, the consumption of Tolerance path usages does not entitle an Access Holder to additional capacity. Tolerance is a means of providing flexibility to Access Holders, recognising that their shipping patterns will vary from month to month. The consumption of Tolerance is effectively the consumption of a BPU from another period and counts towards the Access Holder's ACP.
- The approach proposed by ARTC, where recovery of Ad Hoc Charges is limited to where ARTC passes all TUTs in a period (testing whether sufficient capacity is available of all BPU and the MTC in a Period), as well as having provided aggregated ACP over the year would seem to align better to the proposed contractual commitments made by ARTC.
- Retaining only a proportion of the Ad Hoc Charge adopts a modest incentivisation and is unlikely to become an excessive burden on Access Holders who may have benefited from AHPU's in application.

7 QUESTIONS FOR STAKEHOLDERS

ARTC seeks stakeholder views in relation to the proposed approach set out in section 5. The following questions are provided as a guide only. Stakeholders should feel free to comment on any other aspect of this Discussion Paper or related matters, including proposing an alternative positive financial incentive scheme relating to the TUT. Please see section 2.2 for further details regarding submissions.

1. Do you believe a positive performance incentive scheme with financial benefits to ARTC that balance's out any negative incentives currently contained within the TUT and Annual Reconciliation can also add value to you as an Access Holder?

2. Do you support the concept of excluding revenues associated with the positive performance incentive scheme from the Ceiling such that it would allow ARTC to retain revenue above the current Ceiling in certain circumstances? If not, what alternative could be provided to provide a positive financial incentive to ARTC?

3. If ARTC is permitted to retain revenue outside of the Ceiling, do you foresee any related issues that would need to be addressed, and how might these be mitigated?

4. Do you foresee any negative impact on other mechanisms under the HVAU, e.g. trading? How might these negative impacts be mitigated?

5. Do you support the adoption of the proposed incentive mechanism? Please provide reasons for your view.