

AUSTRALIAN RAIL TRACK CORPORATION LTD

**ARTC HUNTER VALLEY ACCESS UNDERTAKING
CAPACITY LOSS REVIEW
DISCUSSION PAPER**



OCTOBER 2012

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Dictionary

The following industry specific terms or abbreviations have been used in this paper.

Access Holder	An entity that has entered into an AHA with ARTC. Typically this will be a coal producer, but in some cases may be a coal consumer (eg a power station).
AHA	Access Holder Agreement. This is the form of contract entered into between ARTC and its coal customers that sets out the terms and conditions by which ARTC will provide Train Paths. An associated contract, the OSA allows Train Operators to utilise the Access Holder's rights to a Train Path. Note that the HVAU contains an Indicative Access Holder Agreement (IAHA) which is the model for all AHAs.
AIAU	ARTC Interstate Access Undertaking. This is the access undertaking applying to ARTC's interstate rail network from Brisbane to Kalgoorlie. The AIAU connects to the Network in the vicinity of Newcastle. Some Hunter Valley coal traffics operate nominally under both the AIAU and the HVAU.
ARTC	Australian Rail Track Corporation. ARTC manages the Network and the interstate network.
Capacity Entitlement	The entitlement to be assigned a number of Train Paths between specific locations for operation by a nominated Train Operator as detailed in the Access Holder's AHA.
CRC	Country Rail Contracts division of Transport for NSW, formerly the Country Rail Infrastructure Authority (CRIA). CRC is the owner of some of the rail infrastructure adjoining the Network.
DC	DC refers to where the cancellations include a double count. This arises due to some cancellations being attributed to more than one cause and/or responsible party.

HVAU	The Hunter Valley Coal Network Access Undertaking as approved by the ACCC which came into operation 1 July 2011. The HVAU regulates access arrangements for the Network.
HVCCC	The Hunter Valley Coal Chain Coordinator, a body that is responsible for coordinating planning across the Hunter Valley coal chain.
IAHA	Indicative Access Holder Agreement. This is the model AHA that forms the starting point of the negotiation of an AHA with an applicant. The IAHA contains certain terms (identified in the HVAU as Tier 1 terms) that are required to be uniform across all AHAs and which may be adjusted unilaterally if approved by the ACCC.
ILRT	Integrated Live Run Team. A group comprising representatives from a number of service providers that make adjustments to the live run program in real time. Most participants are co-located at the HVCCC office, although to date some have chosen not to have a physical presence, liaising instead via telephone.
IOSA	Indicative Operator Sub Agreement. Similar to the IAHA, the HVAU contains an IOSA that is a model OSA for negotiation with Train Operators and Access Holders.
LRSG	Live Run Superintendent Group. A group comprising superintending managers from each Train Operator, Terminal Operator and ARTC that is convened daily to determine, inter alia, the causes of cancellations and to assign responsibility. The HVCCC acts as convenor for the group.
Network	The ARTC Hunter Valley rail network covered by the HVAU.

NSWRAU	NSW Rail Access Undertaking. The NSWRAU is the Access Undertaking that applies to the NSW rail network not otherwise covered by the HVAU or the AIAU. This includes some portions of the rail network adjacent to the HVAU in the Newcastle port area and the rail infrastructure north of Werris Creek in the Gunnedah Basin.
OSA	Operator Sub Agreement. This is a tri-partite agreement between the Access Holder, Train Operator and ARTC that permits the Train Operator to use Train Paths assigned for its use under the Access Holder's Capacity Entitlement in an AHA.
Train Operator	The operator of a train. There are currently 4 Train Operators operating coal trains on the Network, FreightLiner, Pacific National, QR National and Southern Shorthaul (now Qube).
Train Path	An instance of a time based path available for a train to operate between specific locations on the Network. Note that this equates to the term Train Path Usage in the IAHA/IOSA where the term Train Path has a slightly different meaning.
Terminal Operator	The operator of a coal terminal, principally PWCS and NCIG, but could include the operator of a domestic receival facility such as a power station.
Tolerance Train Path	A Train Path that is available to an Access Holder over and above its Capacity Entitlement for a particular period in certain circumstances.
True Up Test	The True Up Test is a mechanism described in Schedule 2 of the IAHA designed to recompense Access Holders in circumstances where ARTC has not made sufficient Train Paths available to meet the contracted Capacity Entitlements of all Access Holders.

UF Unit of forfeit. A portion of a Train Path. When added together the UFs for the relevant period would determine the number of Train Paths that would be deducted from an Access Holder's Capacity Entitlement.

Relevant Documents

Many of the documents referred to in this discussion paper are publicly available. They may be obtained from the links below:

HVAU http://www.artc.com.au/library/AS_HV_Undertaking_2011.pdf

Network map

<http://www.artc.com.au/library/ARTCS3090007%20HV%20Undertaking%20Jun%202012.pdf>

IAHA http://www.artc.com.au/library/AS_HV_Undertaking_2011.pdf

IOSA

http://www.artc.com.au/library/AS_HV_Undertaking_%20Indicative%20Operator%20Sub-Agreement.pdf

AIAU http://www.artc.com.au/library/Schedule%20D%20-%20Indicative%20Access%20Agreement%20clean_0.pdf

Interstate maps <http://www.artc.com.au/Content.aspx?p=98>

NSWRAU <http://www.artc.com.au/Content.aspx?p=176>

Executive Summary

CONTEXT

ARTC's Hunter Valley Coal Network Access Undertaking (HVAU) requires ARTC, in the absence of a corresponding review by the HVCCC, to conduct a review of the incentive mechanism to reduce capacity losses contained within the Access Holder Agreement (AHA) between ARTC and Access Holders.

The current mechanism is designed to remove Train Paths from an Access Holder on the basis of a recommendation received from the HVCCC. That recommendation is formed on the basis of train cancellations as determined by a group of service provider practitioners, the Live Run Superintendents Group (LRSG), using a documented process.

This discussion paper canvasses a number of issues relating to the existing and possible alternative mechanisms and seeks stakeholder comment, including the proposal of alternative schemes. To this end, the paper sets out a number of questions at the end of each section to assist stakeholders in their consideration of the issues. ARTC encourages stakeholders to consider the matters raised in this paper in detail and make such comments as they believe appropriate.

SCOPE OF THE PROBLEM

Cancellations occur on a daily basis and are indicative of a loss of capacity. Approximately 11% of planned trains never run. Of the cancellations, 60% are attributed to Train Operators, 19% to Access Holders (Load Points), 12% to ARTC, 8% to Terminal Operators.

ISSUES WITH THE EXISTING PROCESS

The current process has a number of issues that may make it ineffective as an incentive to reduce capacity losses. These include:

- The current cancellation process only attributes cancellations to Access Holders where they are directly responsible for the events giving rise to each cancellation. Therefore, the current mechanism would only apply, at most, to 19% of cancellations. The implication of the HVAU review process is that losses would be attributed to Access Holders where their Train Operator was

the cause. The current system does not provide a mechanism for this ‘second order’ attribution of capacity loss.

- Cancellations can be a positive measure undertaken by Train Operators on a voluntary basis to restore operations back as close as practical to plan, once a disruption has occurred. A cancellation is a consequence of the accumulation of capacity loss in the system, not the cause. It is not clear that cancellations are the best measure of the loss of capacity. There may be a more direct measure that better reflects capacity losses to the coal chain.
- The current process relies on the voluntary cooperation of parties to determine the party responsible for cancellations. If the commercial consequence of capacity loss increases, as may occur if more losses are attributed to Access Holders, this may make the current voluntary process less workable either through biasing elements of the process (eg making a Train Operator reluctant to cancel a train), or through a reluctance to participate effectively in the process.

ALTERNATIVE MEASURES

The paper discusses several options for alternative measures, including basing the sanction on:

- the ‘dump slots’ lost at the coal terminals,
- time lost by trains in transit compared to their planned time.

Both of these measures would still require the investigation and attribution of losses to Access Holders but may provide a better measure of lost capacity compared to the use of cancellations, and may avoid the potential negative impact on the use of cancellations as a remedial measure.

Nonetheless, a number of issues need to be resolved, including who should administer the process and the rules around how the allocations should be made. Other issues, such as whether any sanction should be capped must also be considered.

The implementation of any scheme that attempts to allocate sanctions for losses that are, by their nature, at least partially indirect and often inter-related with the actions of other parties will raise complex issues across a broad range of matters. Stakeholders are encouraged to carefully consider the issues set out in the detail of this paper in formulating their submissions.

1 INTRODUCTION

1.1 Purpose Of This Discussion Paper

The purpose of this discussion paper is to seek comments from stakeholders in relation to a mechanism to provide incentives to the Hunter Valley coal chain to minimise the loss of capacity.

1.2 Request For Comments

ARTC invites submissions as to whether particular actions or omissions of Access Holders or their Operators (such as cancellation of scheduled train services) have a material impact on capacity on the Network or coal chain. Stakeholders are encouraged to submit proposals for a suitable framework to address any adverse impact on capacity caused by such actions or omissions including any rules for the allocation of losses of capacity to the responsible Access Holder.

In order to assist stakeholders in their consideration of the issues, a series of questions are raised at the end of each section of this paper. Stakeholders are encouraged to consider these questions when putting forward any proposal. Submissions are not restricted to consideration of these questions, and may refer to any relevant issue. However, any proposed scheme that does not identify how the issues raised might be dealt with may be difficult to evaluate.

Submissions should be made in writing, preferably submitted electronically to the email address below. The closing date for submissions is Friday 7th December, 2012.

Submissions should be addressed to:

Mr Martin Jones
General Manager Operations and Logistics
Australian Rail Track Corporation
33 Newton Street
Newcastle, NSW 2292

Email: Martin.Jones@artc.com.au

1.3 Context

Australian Rail Track Corporation (ARTC) has prepared this paper and will be conducting the associated process in accordance with the requirements set out in

section 5.8 of ARTC's Hunter Valley Coal Network Access Undertaking (HVAU). The process recognises that the HVCCC has not conducted an industry wide review by 30 June 2012 as contemplated at section 5.8(b)(i) of the HVAU.

The HVAU regulates access arrangements for the Hunter Valley Coal Rail Network (Network). The HVAU was approved by the ACCC on 23 June 2011 and came into operation 1 July 2011.

The HVAU covers all types of train traffic on the Network. However, the emphasis of the HVAU is in dealing with coal traffic, by far the largest traffic on the Network. The HVAU contains many special provisions for dealing with coal traffic, some of which deal with the management of the Network as a whole (as far as coal traffic is concerned). This paper deals expressly with the management of the loss of capacity to the coal chain and does not apply to non-coal traffics.

Generally speaking, coal traffic is contracted with ARTC through a two-step process:

- 1) An entity with an interest in acquiring capacity to operate coal trains on the Network will negotiate an Access Holder Agreement (AHA) with ARTC. This provides a right to be provided a quantum of Train Paths, but not the right to operate trains on the Network. Generally, an Access Holder (ie someone who has executed an AHA with ARTC) will be a coal producer or large-scale consumer of coal, eg a power station operator.
- 2) Train Operators and associated Access Holders will negotiate an Operator Sub Agreement (OSA) with ARTC. An OSA is a tri-partite contract that permits a Train Operator to operate trains on the Network, using the Capacity Entitlements of the associated AHA. OSAs have been designed as flexible instruments so that an Access Holder may change its Train Operator relatively easily (with respect to the contractual arrangements with ARTC) so as not to create barriers in the market for Train Operator services.

This arrangement is somewhat unusual for track access in Australia but has been designed specifically to give coal producers and consumers more certainty over their contracted capacity over the long term while at the same time enhancing the framework to allow for investment in the Network and facilitating competition between Train Operators. As part of this arrangement, all track access charges are paid for by the Access Holder.

The actual allocation of Train Paths for use by a Train Operator each day is managed by the Hunter Valley Coal Chain Coordinator (HVCCC) on behalf of ARTC.

1.4 Geographical Application Of This Discussion Paper

This paper deals with a matter arising specifically under the HVAU and therefore the Network covered by the HVAU. The Network is defined in HVAU Schedule B and shown diagrammatically in Annexure 1 to Schedule B.

Some coal traffics operate on ARTC tracks outside of the Network, and these are regulated by either the:

- ARTC Interstate Access Undertaking (AIAU), or
- NSW Rail Access Undertaking (NSWRAU).

In practice, both of these regulatory instruments permit the same scheme of contracting for access (ie the use of an AHA and associated OSA) as applies to the Network under the HVAU, even though the general commercial framework is different. For the movement of export coal trains on these adjacent networks, ARTC has generally negotiated similar contractual arrangements to those applying within the operation of the HVAU. Therefore, the issues relating to the management of coal traffics discussed in this paper would apply to those traffics technically operating under the AIAU or NSWRAU for part of their journey if they are operating under an arrangement similar to the AHA/OSA scheme.

However, these issues are relevant to the operation of coal trains on ARTC's rail infrastructure only. Some coal traffics traverse both the ARTC rail infrastructure and track owned by RailCorp. The arrangements canvassed in this paper do not apply to the portion of any journey undertaken on the RailCorp network. Similarly, these arrangements would not apply to the Transport for NSW Country Rail Contracts (CRC) owned tracks should any coal traffic travel on those tracks.

1.5 HVAU Review Requirement

At the time of the implementation of the HVAU, stakeholders were concerned that the HVAU might not provide appropriate incentives to minimise losses in coal chain capacity occurring due to avoidable events. A number of schemes were proposed by industry participants but no consensus was achieved and the schemes were not considered by ARTC as being amenable to practical implementation.

In that context, IAHA clause 11.6 was included to provide an incentive to avoid causing the loss of capacity. The mechanism provides for ARTC to remove Train Paths from the Capacity Entitlements of an Access Holder responsible for causing cancellations in certain circumstances (see section 2 below). At the time of its implementation, it was

not clear how effective this mechanism would be. As a consequence, ARTC inserted the section 5.8 review process into the HVAU.

Section 5.8 provides for ARTC to conduct a review of the current AHA clause 11.6 mechanism, and if it is found appropriate, to modify that mechanism. HVAU section 5.8 is set out in full in Appendix A. In summary, the requirements of the review are as follows:

- ARTC is to consider “the policy and processes for identifying and allocating losses of Capacity caused by Access Holders and their Operators and potential incentive mechanisms to minimise such losses where they have a material impact on Capacity or Coal Chain Capacity or the Capacity entitlements of Access Holders, including those processes outlined in clause 11.6 of the Indicative Access Holder Agreement”.
- ARTC is to commence the review within 12 months of the commencement of the HVAU, ie by 1 July 2012.
- The provision anticipates that the HVCCC might conduct its own review, in which case, ARTC is to participate in that review, otherwise ARTC will conduct a review and consult with the HVCCC and other stakeholders.
- ARTC is to invite submissions as to whether “particular actions or omissions of Access Holders or their Operators (such as cancellation of scheduled Services) have a material impact on Capacity, Coal Chain Capacity or the Capacity entitlement of Access Holders” and “submit proposals for a suitable framework to address any adverse impact on Capacity caused by such actions or omissions including any rules for the allocation of losses of Capacity to the responsible Access Holder”.
- Once submissions have been received, ARTC is required to consider them in good faith, and “*following consultation with the HVCCC (and further consultation with other stakeholders at ARTC's discretion)*” if in ARTC’s opinion changes to the HVAU and/or AHA are appropriate, then ARTC will apply to the ACCC to make the relevant amendments to those documents.
- In determining whether a change is justified, ARTC is required to consider the following criteria:
 - i) The change would be likely to have demonstrably positive benefits in:
 - A) increasing the capacity of the Network, and
 - B) allocating the impact of an event causing a capacity shortfall to the Access Holder causing the event

- ii) the anticipated benefits of the change outweigh its potential detriments including the costs associated with implementation and monitoring of the proposed mechanism and an increase in the likelihood of disputes in assigning capacity losses among coal chain participants; and
 - iii) the change is supported by the HVCCC and has broad support of coal chain participants.
- Once approved by the ACCC, changes would be applied to the IAHA and all existing AHAs through the “Tier 1” mechanism (see 1.6 below).
 - If ARTC decides not to request the approval of an amendment from the ACCC, ARTC must publish a report on its website setting out the reasons for not seeking the amendment by 30 June 2013.

Since the commencement of the HVAU, ARTC has engaged in discussions with the HVCCC as to whether the HVCCC intended to commence a review. On 15 June 2012, the HVCCC formally advised ARTC that it intended not to conduct a review. Prior to June 2012, in preparation for a possible HVCCC review or in its absence, the conduct of an ARTC review, ARTC initiated an internal review as a preliminary process. Once it became clear that the HVCCC would not be conducting a review, ARTC commenced the preparation of this discussion paper. ARTC has also kept coal producers apprised of progress via ARTC’s quarterly review meetings.

The HVAU section 5.8 process anticipates the possibility that ARTC will engage in a second round of consultation. This is discretionary to ARTC but may be required to canvas or clarify any proposals that arise through the first round submissions. It is anticipated that this second round will occur in early 2013, if required, once ARTC has considered the initial stakeholder submissions.

It will be noted that the review relates to the loss of capacity “*caused by Access Holders and their Operators*”. As such, the mechanisms considered in this paper exclude consideration of losses arising through the track providers, Terminal Operators or other parties that are not Access Holders or their Train Operators.

1.6 Tier 1 Mechanism

The circumstances surrounding the provision of access to the coal chain mean that a number of elements of the commercial arrangements are reliant on the performance of all Access Holders. This means that AHAs must, of necessity, refer to these wider arrangements. This requires certain elements of every AHA to be uniform. Other parts of the contract can vary by negotiation.

The HVAU recognises this need for uniformity in certain aspects of the AHA by identifying those elements that are mandatory as “Tier 1” provisions, whereas “Tier 2” provisions are negotiable. In addition to requiring all AHAs to contain identical Tier 1 provisions, the HVAU also provides that a change in the Tier 1 provisions, approved by the ACCC, will automatically be applied to existing AHAs. In this way any changes that the ACCC deems should apply uniformly across all Access Holders can be implemented regardless of pre-existing contracts.

The existing AHA clause 11.6 arrangement relating to the removal of Train Paths from an Access Holder’s Capacity Entitlement for causing cancellations is Tier 1, and HVAU section 5.8(d) provides that any amended process would also be Tier 1.

2 CURRENT HVAU/AHA POSITION

IAHA clause 11.6 sets out an arrangement whereby the HVCCC provides a report to ARTC each week that details:

- a) the number of cancelled services assigned to each Access Holder in the previous week, and
- b) whether the total number of cancellations assigned to the Access Holder in that week had an impact on capacity.

If the HVCCC is of the view that the cancellations have impacted capacity, then ARTC may deduct Train Paths (up to two per event) from an Access Holder’s Capacity Entitlements in the following month (or quarter, if the Access Holder has a quarterly allocation).

The removal of Train Paths is discretionary. If ARTC decides not to remove Train Paths from an Access Holder, then ARTC will provide a written report to the HVCCC as to why it has taken that decision.

The above is a summarised description. A full copy of IAHA clause 11.6 is provided in Appendix A.

The determination of the cause and allocation of responsibility for cancellations is currently carried out by the Live Run Superintendent’s Group (LRSG) on a daily basis. The operation of the LRSG and the cancellation process are described in section 4.2 below. The HVCCC acts as chair and convenor of the LRSG and collates and reports the decisions of that group. It should be noted that the LRSG is separate from the relatively new Integrated Live Run team (ILRT) that has been set up under the

auspices of the HVCCC. The ILRT comprises staff from the major service providers working together to manage and mitigate disruptions to the daily plan in real time.

IAHA clause 11.6 has a technical description of the loss of capacity that would trigger an 'opinion' from the HVCCC regarding the loss of capacity, noting that the IAHA treats such an opinion more or less as a recommendation to ARTC, though it is not expressed as such. The description relates to the loss of:

- Capacity,
- Coal Chain Capacity or
- the Capacity Entitlement of another Access Holder.

The definitions of these terms are provided in Appendix A. However, approximately, they relate as follows:

Capacity ARTC's ability to provide Train Paths on the Network.

Coal Chain Capacity the throughput capability of the Hunter Valley coal chain as a whole.

Capacity Entitlement the rights of an Access Holder to be assigned Train Paths (for use by its nominated Train Operator(s)).

As such, the intention is that any cancellations that have led to a loss of capacity either directly related to ARTC's provision of Train Paths or loss of throughput in the wider coal chain would qualify to trigger the IAHA clause 11.6 mechanism.

At the time of preparing this discussion paper, the HVCCC has routinely provided a daily report on cancellations to ARTC but has not determined that an Access Holder has caused a material¹ loss of capacity. It is understood that this is due to the focus, to date, on improving other aspects of the management of the coal chain.

In the absence of any advice from the HVCCC, ARTC has not applied the reduction of Train Paths to any Access Holder since the AHAs came into operation in February 2012. It could therefore be said that the effectiveness of the current process is unknown.

It should be noted that the process for the allocation of cause for a cancellation, on which the report depends, does not assign cause to an Access Holder except when an

¹ See discussion in 4.6 regarding materiality. Although the AHA clause 11.6 mechanism does not mention materiality, the HVCCC currently appears to interpret the requirement as relating to material losses. Also note that the HVCCC is not bound by the AHA requirements.

Access Holder is directly identifiable as the root cause of the cancellation, ie there is no attribution back to an Access Holder for a loss caused by a Train Operator. The current attribution process is discussed in 4.2 below.

3 SCOPE OF THE PROBLEM

In order to provide stakeholders with an understanding of the issue and to give some guidance as to where an appropriate mechanism might lie, an analysis has been undertaken of cancellations for the calendar year-to-date to 24 August 2012.

The dataset is described in more detail in Appendix B.

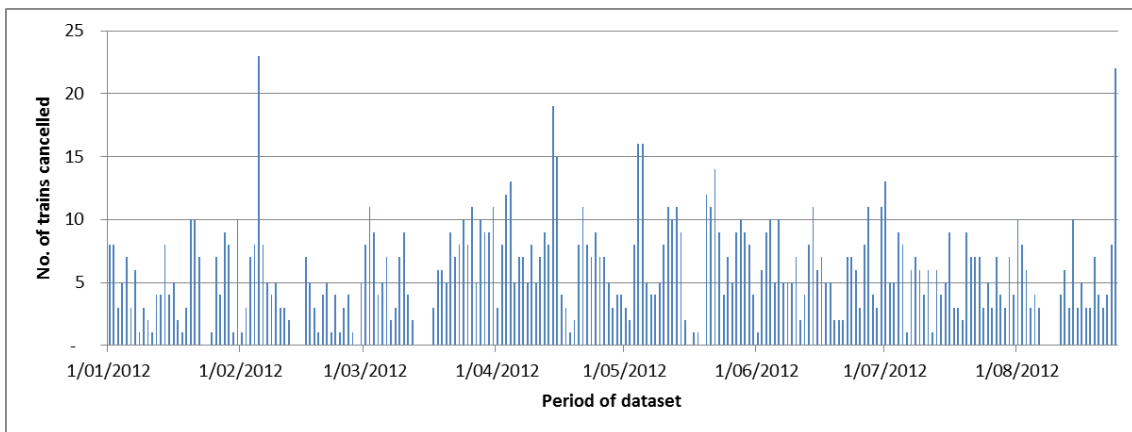
3.1 Cancellation Data

The following commentary and graphs summarise the results of the analysis of the cancellation data. Note that in some instances the allocation of responsibility for a cancellation will be split across two or more parties (or causes); this leads to the double counting of cancellations in some of the categories below so that some of the reporting adds to 1,430 cancellations even though only 1,346 trains were actually cancelled. There were 45 events in which cancellations were split, and 73 trains were allocated to more than one party. This represents 5% of all cancellations. Where the data reflects the double counting of cancellations in the statistics below, this is identified with **(DC)**. Double counting only affects trains and not tonnes as these are split proportionally between the parties or causes when a cancellation is split.

- Of the 237 days in the dataset, there were cancellations on 221. Of the 16 days on which there were no cancellations, 11 were during maintenance shutdowns. This suggests that train cancellations are currently a routine facet of the coal chain.
- There were 1,346 cancellations equating to 10.3m tonnes of lost capacity arising from 948 events. This compares to HVCCC planned 12,657 export trains² for 92.3 m tonnes. Thus, cancellations represent a loss of 10.6% of trains and 11.1% of tonnes.
- Figure 1 shows the daily numbers of cancellations over the period of the dataset. As can be seen these appear to be randomly distributed, as one would expect for unplanned events.

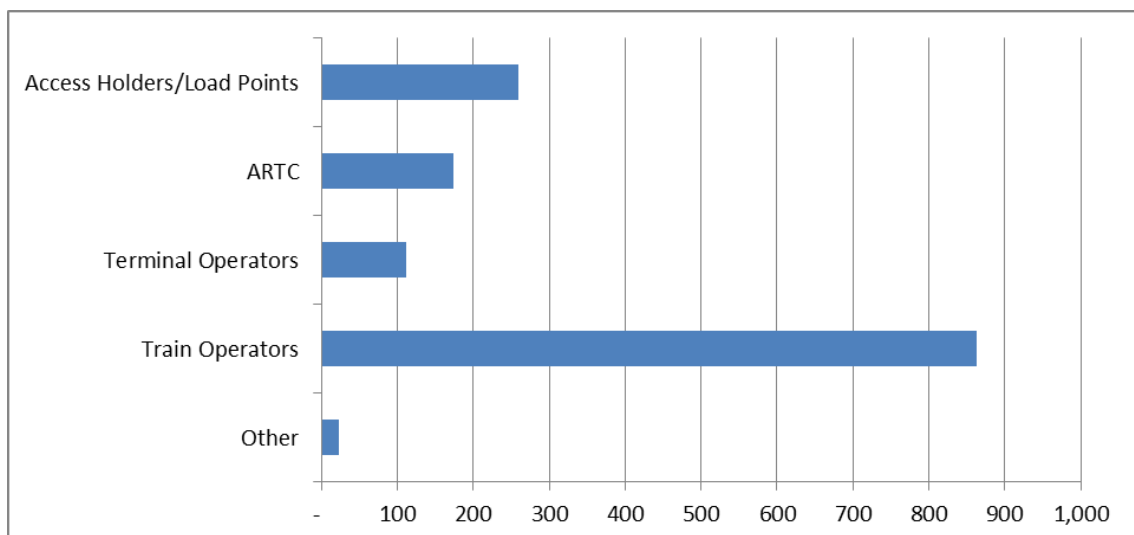
² These figures exclude planned domestic coal trains.

Figure 1: Distribution Of Cancellations



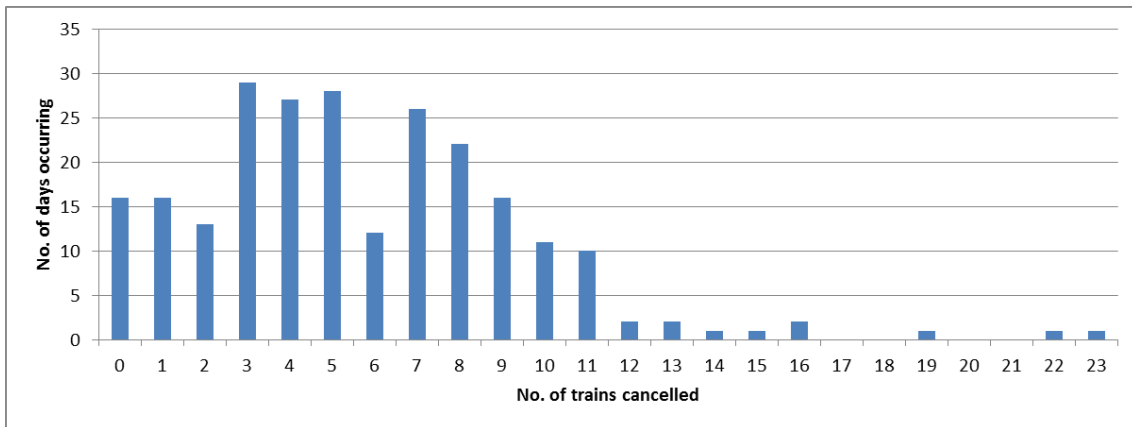
- Figure 2 shows the number of cancellations by service provider type. Train Operators were responsible for 60%, Access Holders 19%, ARTC 12% and Terminal Operators 8%.
- Of the 1,430 cancellations (DC), 260 were attributed to an Access Holder and 1,170 to a service provider. This is not unexpected. To the extent that a coal producer has a problem that could result in a cancellation, eg insufficient coal available to haul or break-down at a load point, a train can potentially be diverted to another load point and no cancellation will result. Therefore, absolute losses (as measured by cancellations) will not necessarily reflect the underlying deviation from plan. For the most part, such mitigation is not available to Train Operators or Terminal Operators.

Figure 2: Cancellations By Type Of Service Provider



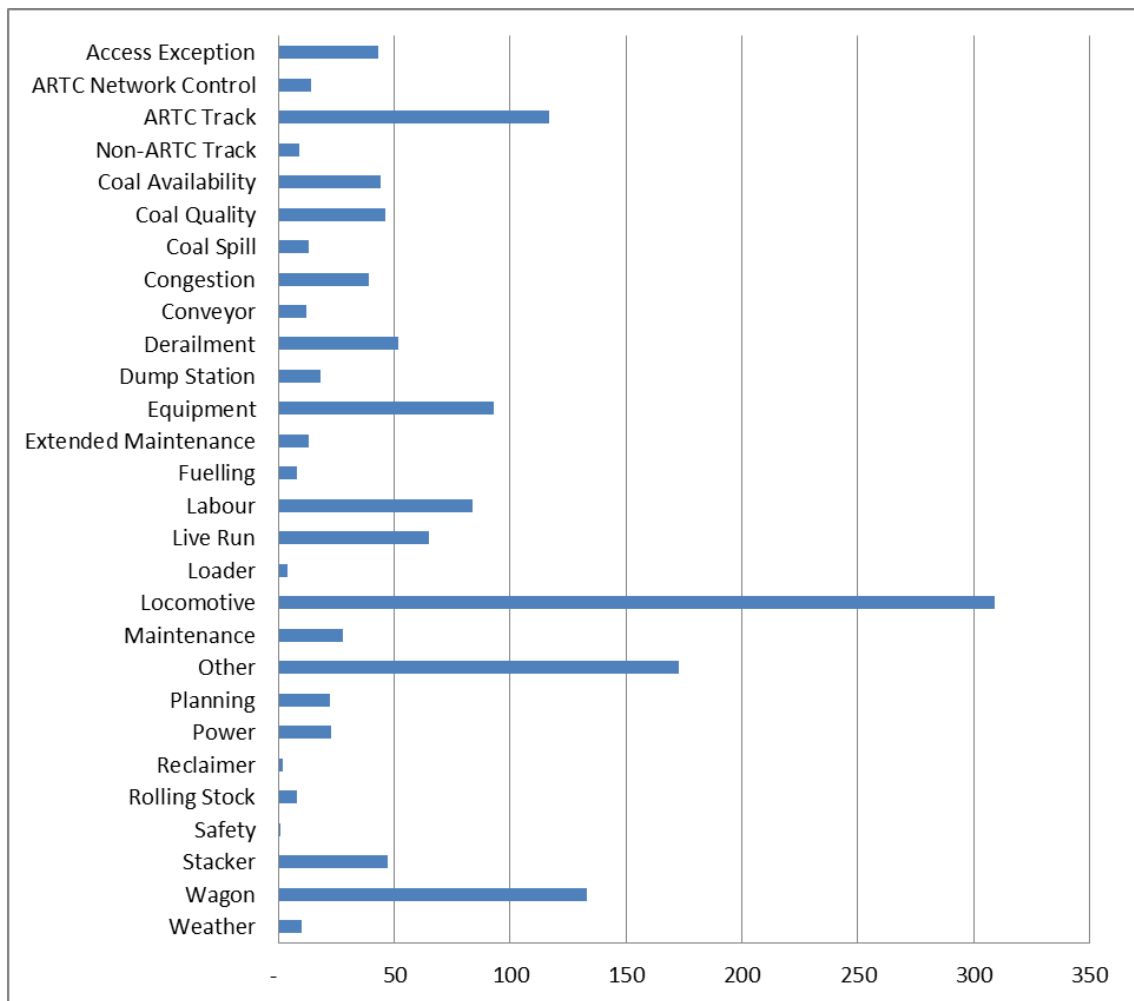
- Figure 3 shows a histogram of the number of days on which each quantum of cancellations occurred. On 16 days there were none, on one day there were 23. Figure 3 shows that the daily cancellation rate varies across a range, largely between 0 and 11, rather than being concentrated and that there are a few days with substantially more cancellations.

Figure 3: Frequency Of Cancellations



- The causes of cancellations are reported in 28 categories as shown in Figure 4. By far the largest category is that of locomotive failures, accounting for 22%. This is followed by ‘Other’ at 12%, wagon failures at 9% and ‘ARTC Track’ at 7%. ‘Other’ represents a diverse range of causes, some of which could probably be assigned to another category but for one reason or another were not. Therefore the ‘Other’ category is probably somewhat over represented. These percentages are calculated on the DC cancellations as some cancellations have more than one cause.

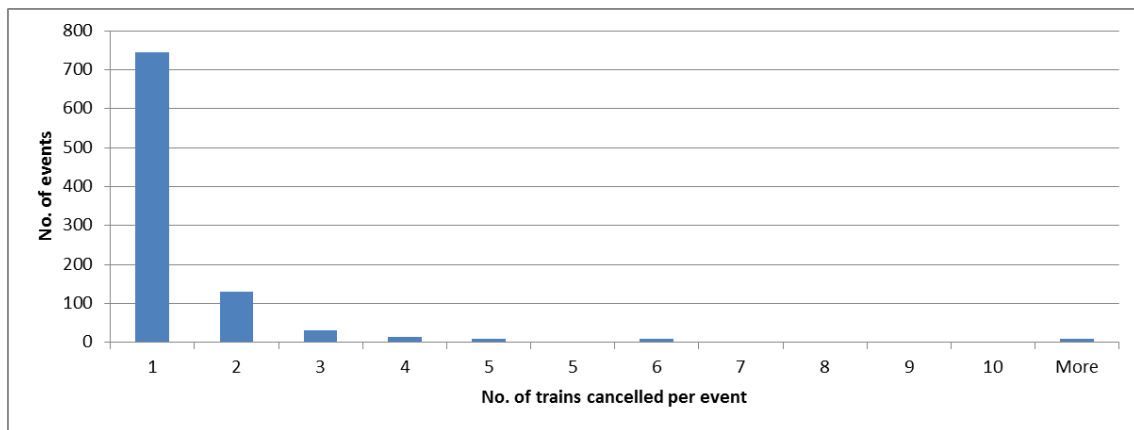
Figure 4: Cancellations By Cause



- As might be expected, most events cause only one cancellation and there is a marked drop off in the number of cancellations per event as can be seen in Figure 5. Of the 948 events, 876 (92%) resulted in either 1 or 2 cancellations. However, some infrequent outlier events were responsible for large numbers of cancellations, the two worst events each causing 24 cancellations.³ There were 8 events that resulted in more than 10 cancellations.

³ An event may result in cancellations on more than one day, therefore while there were two events that caused 24 cancellations, these do not show up directly as such in the 'cancellations per day' histogram.

Figure 5: Cancellations Per Event



3.2 Diversion Data

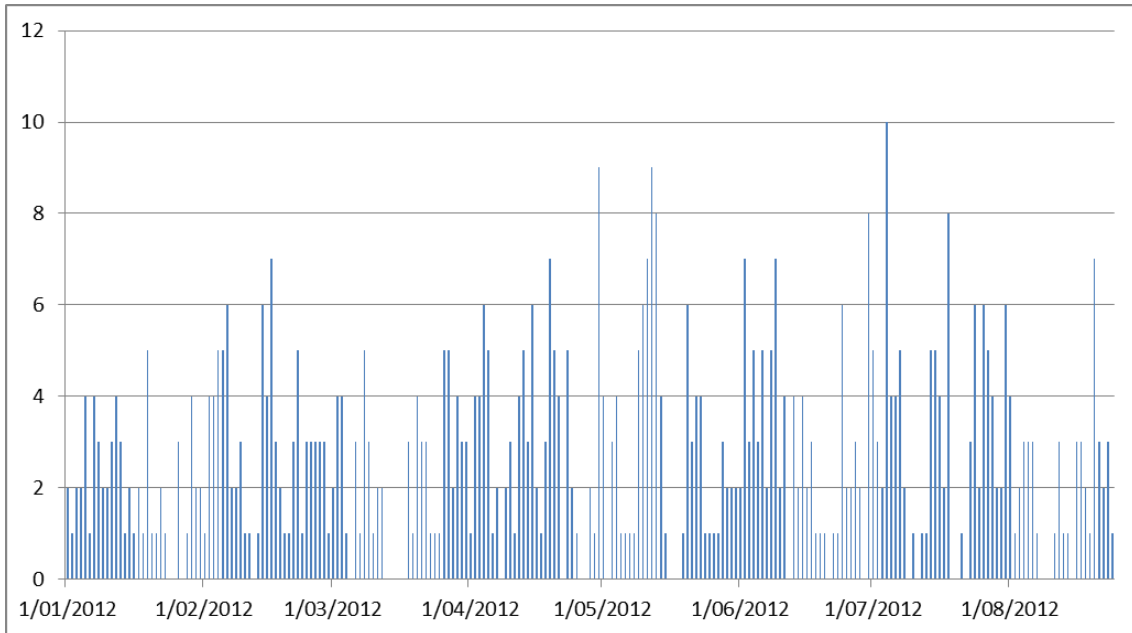
Diversions occur when a train service is diverted from its original mission to an alternative mission. This might mean that the train loads a different cargo than originally planned at the same load point or loads a different cargo at a different load point. On some occasions, the cargo may be diverted to unload at a different coal terminal. A diversion may also be for reasons other than the failure of equipment or infrastructure. For example coal quality may determine that a particular quality of coal is required to blend a cargo other than that which was initially planned.

The following commentary and graphs summarise the results of the analysis of the diversion data:

- Diversions occurred on 207 days out of a dataset of 237. There were no diversions on 30 days.
- Figure 6 shows the daily numbers of diversions over the period of the dataset. As can be seen these appear to be randomly distributed, as one would expect for unplanned events.
- There were 623 diversions. Unlike cancellations, these do not result directly in lost capacity, depending on how capacity is measured. In some circumstances capacity may be gained through a diversion in the short term, eg if the diversion results in a shorter haul than the originally planned haul. At the very least, a diversion salvages productive capacity that would otherwise be lost if the alternative was a cancellation. However, a diversion reflects a movement away from the plan, and even if capacity is nominally gained in the short term, the originally planned haul will need to be carried out at a later time. As such replanning will not be visible as a loss of capacity, it may be

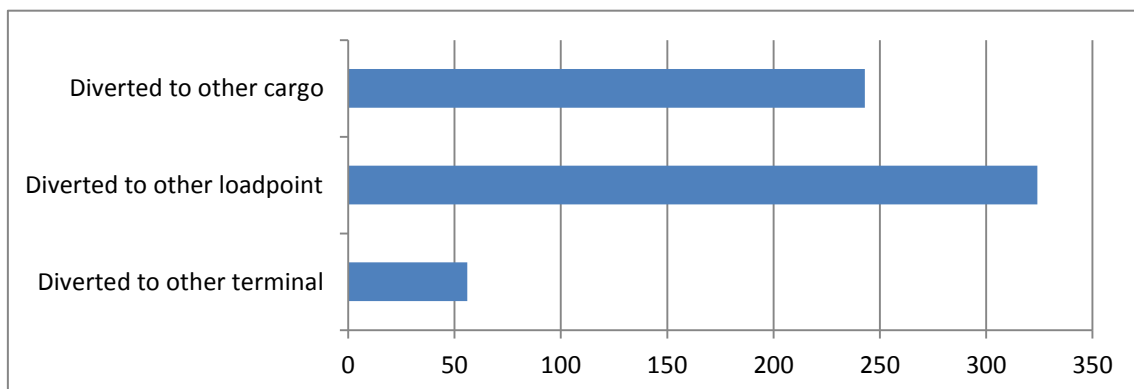
difficult to identify a loss arising through a diversion. Therefore, in a wider sense, it is most likely that a diversion will result in an overall loss of capacity, even though it may be difficult to identify the loss.

Figure 6: Daily No. Of Diversions



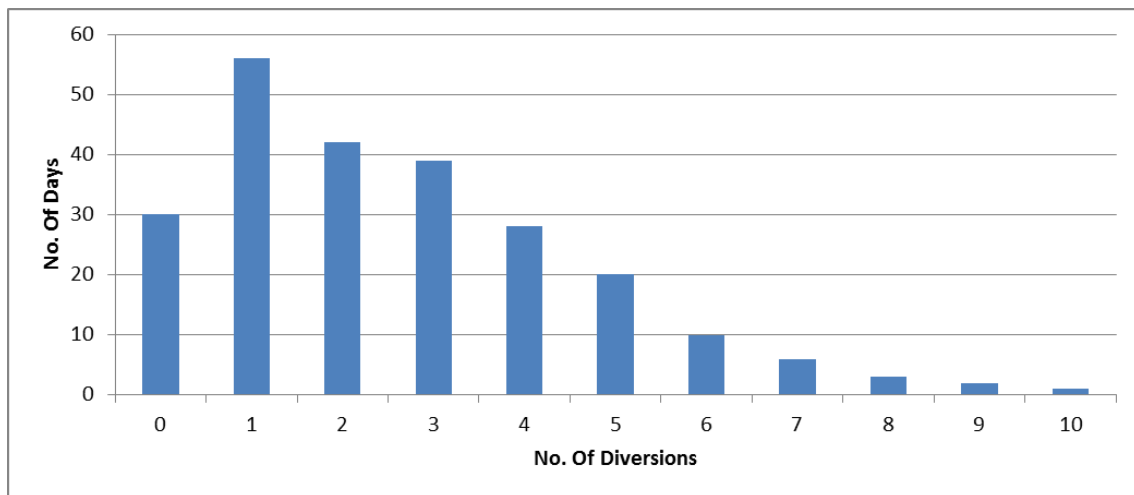
- Three reasons are shown in the data for diversions, of which 52% are to a different load point, 39% are for a different cargo and the remaining 9% are for a change in terminal. (See Figure 7.) These reasons reflect the result of the diversion, not the underlying cause.

Figure 7: Diversions By Cause



- The frequency of diversions declines relatively linearly as shown in Figure 8. Only 1 diversion occurred on 36% of days, while the maximum was 10 diversions on 1 day only.
- The datasets have a Pearson Product Moment Correlation of 0.3 indicating that there is no strong statistical correlation between cancellations and diversions.

Figure 8: Frequency Of Diversions



4 ISSUES FOR CONSIDERATION

4.1 What Is Lost? Are Cancellations An appropriate Measure?

The existing IAHA clause 11.6 mechanism was included to address a concern by stakeholders that an incentive was required to discourage Access Holders from inappropriately consuming capacity (in a broad sense). At the time that the HVAU and IAHA were finalised, it was felt that the best way to achieve this was through a mechanism based on the forfeiture of Train Paths where an Access Holder was found to have caused a loss to the coal chain through causing one or more cancellations. In that context, a cancellation was believed to be an appropriate and convenient measure of the loss of capacity.

The cancellation of a Train Path arises through a potentially complex series of interactions. In some instances a cancellation will be directly related to an identifiable event that gives rise to the sufficiently severe delay of one or more planned train services such that the program will suffer further if a cancellation is not made. A cancellation may also arise through the cumulative degradation of the train program

over a period, without any one event necessarily being the clear trigger – or the event that is identified as triggering a cancellation might not have done so had a prior event not also occurred.

Under current processes, a cancellation arises through the voluntary action of a Train Operator. In some instances, eg due to commercial considerations or a matter of prestige, a Train Operator might choose not to cancel a train even though the most appropriate action would be to do so. In this way, a sanction based on cancellations may be less effective if Train Operators are discouraged from volunteering cancellations.

The cause of a cancellation will often have no relationship to the actual train service cancelled and typically a Train Operator will seek to cancel a train that will assist in returning as closely to plan as possible. This may be achievable through a choice of alternatives. As the Train Operator chooses which train to cancel, it might choose one other than the one most advantageous to the coal chain as a whole due to its own commercial considerations. For example, if it had a haulage contract with producer A that penalised it for the non-provision of a train and a contract with producer B that had no such penalty, there would be an incentive to cancel a train for B in favour of A. This may not change the impact of the cancellation mechanism in the sense that the cause of the cancellation would still be the same, but it may be unhelpful to the coal chain if commercial pressures on Train Operators impact negatively on an innocent party, particularly if such impacts become routine due to different commercial settings between the various parties.

A cancellation can sometimes be avoided through the Train Operator diverting a train to load at another load point or to load a different cargo from the same load point. For example if the event is the breakdown of load point A, it may be possible to divert a train to load point B. While this may have an upstream impact, eg requiring the replanning of a series of subsequent operations (trains, dump stations, Train Paths and load points), it may still be preferable to losing the capacity altogether.

It is important to understand that cancellations are actually useful in the management of the system. They allow the system to return to plan and aid in the management of the myriad of resources that must be brought to bear to successfully assemble and load a cargo. Any measure that discourages the appropriate use of cancellations and diversions or other equivalent mechanisms to remove planned trains from the live run program or return to plan as much as possible, will be counterproductive.

It is not the cancellation itself that causes a loss of capacity. The cancellation is merely a remedy to return as closely as possible to plan once a disruptive event has occurred and no other remedy (eg a diversion) can be effectively implemented. It is the combination of events that initiates the disruption that is the actual cause of the loss of capacity.

A cancellation relates to the removal of a planned service. As such, it does not in any way reflect the losses to the coal chain that arise through the non-planning of trains, ie to the extent that the HVCCC allows for the expectation that capacity losses will arise through the late running of the system, a certain proportion of trains will not be programmed and therefore, those losses will not be recognised through any mechanism that measures planned vs actual results. For example, if the HVCCC knows that today's program will result in the late arrival of train sets tonight, it will not program the related resources until they would realistically be available for tomorrow's program, thus building in a loss of nominal capacity into the program which is invisible to any measure based on actual vs planned outcomes.

Notwithstanding this, cancellations potentially provide a useful point of measurement of loss in a complex system where the actual causes of loss are diverse and sometimes complex. However, one should not adopt a measure as an incentive purely because it is measurable. It is unlikely to be useful if it does not lead to a change of behaviour in the desired direction, or causes dysfunctional behaviours in a related matter.

Request For Comment

- 1. Should the incentive mechanism be based on train cancellations or some other measure (Some possible measures are discussed in section 5)? Should an event that leads to some other remedial action (eg a diversion) also be taken into account – if so how?*
- 2. If cancellations are an appropriate measure, does the current approach for Train Operators to volunteer cancellations work effectively? If not, what alternative method for generating cancellations should apply?*
- 3. Is it appropriate that Train Operators choose which train to cancel? If not, how should cancellations be chosen?*

4.2 Current Cancellation Allocation Process

Cancellations are currently reviewed on a daily basis (Monday to Friday) for the previous day (or weekend on Monday) by the LRSG. The LRSG is comprised of train

operators, port terminal operators, ARTC and HVCCC. While most service providers are represented, it is not comprehensive. RailCorp (which manages track south of Newcastle over which some coal movements traverse) and load point operators do not currently participate. Nor do the operators of domestic coal receival terminals.

The identification of the cause of cancellations and allocation of responsibility is carried out in accordance with a documented procedure developed by the LRSG. In summary, the procedure is:

- Each weekday, the HVCCC produces a draft report on the cancellations. Where responsibility has already been accepted by a party, this is noted.
- The LRSG reviews the remaining cancellations during a daily telephone hook-up. Where possible, the LRSG will agree the cause of each cancellation. An HVCCC representative chairs the hook up and documents the outcomes.
- For any cancellations over which the responsibility is not agreed, a member of the LRSG is nominated to investigate the cause of the cancellation. The investigation is to be completed within 2 days, unless the matter is the subject of a formal investigation.
- Those cancellations subject to a formal investigation will be allocated by the non-impacted parties within 2 days and can only be changed after the formal investigation is complete and if all parties agree.
- For cancellations allocated to an entity that is not a member of the LRSG (eg a coal producer), the relevant Train Operator is responsible for communicating with that entity and if the entity disputes the assignment of responsibility, it defaults to the Train Operator.
- A cancellation may be allocated to multiple parties with tonnage lost apportioned across organisations or causes.

The allocation of responsibility is only to the level of the party found to be directly responsible and does not extend to linking the loss back to an Access Holder except where the Access Holder is directly responsible. Typically this would be a load point failure.

This process has been functioning in this, or a similar, form for a number of years. The LRSG is an informal group and its successful operation relies on the good faith and cooperation of its members to function. There are no existing mechanisms that compel any party to participate nor to accept the results of any decision that is made by the group.

If it was decided to modify either the process for determining the loss of capacity to the coal chain, or to increase the commercial impacts of the acceptance of responsibility of train cancellations, this may reduce the ability of the LRSG in its current form to function effectively, as the incentives to form decisions objectively might be compromised.

Alternatives to the current cooperative structure include:

- a) Having a single body determine the cause of each cancellation and formulate a recommendation as to the sanction that should apply.
- b) Formalise the current structure through some form of contractual arrangement.

Both of these alternatives introduce difficulties, both in concept and practice. For example, the empowerment of a single body to determine responsibility would move that body into a quasi-regulatory role and would raise requirements for fair process such as appeals. In turn this would introduce a complexity and rigidity that might be counter to the interests of the coal chain as a whole, for example it might be necessary to extend the process to allow parties a formal right to put their case, thus delaying the swift allocation of cause and potentially removing the benefit of a quick and objective measure.

On the other hand, formalising the relationship through contracts would require all parties to the coal chain to participate to be effective and would introduce an administrative and legal overhead that some parties would wish to avoid. It is noted that in the dataset used for this discussion paper, 19% (DC) of losses were attributed to parties that were not directly represented in the LRSG. It is unlikely that unrepresented parties will find this acceptable if significant consequences attach to cancellations (or some other measure).

It is important to note that the AHA clause 11.6 process, as it is currently formulated, relies on the provision of a recommendation by the HVCCC which in turn is based on the decisions of the LRSG. As the AHA is a contract between ARTC and an Access Holder, it cannot mandate either the provision of this information nor can it impose any change in the process, outside of the actions of ARTC. Therefore any changes external to ARTC will need to be effected through some means other than the AHA.

Request For Comment

4. *Is the membership of the LRSG appropriate? If not, who should be represented and how?*

5. *Is the process for the assignment of responsibility for cancellations appropriate? Is there a better way?*
6. *Is the current informal approach appropriate, either under a continuation of the existing process or some new process appropriate? If not, what alternative should be adopted?*

4.3 Resolution Of Assignment Of Responsibility

The LRSG attempts to assign cause to most cancellations on the next business day, but if not then within 2 business days. The cause for many cancellations is readily apparent and uncontroversial, at least at the direct responsibility level. However, responsibility for some cancellations is less clear. On a sample day in the dataset used for this discussion paper, 5 events were under formal investigation accounting for 25 cancellations. 6 other events had not been resolved for a further 10 cancellations relating to the 3 previous days. Given that there are, on average, 2.6 cancellations each day, this is not a particularly large number.

One difficulty in the current process is that where a cause is to be assigned to an Access Holder, the relevant Train Operator is required to approach that Access Holder and find out whether the Access Holder accepts responsibility. This necessarily increases the time required to resolve a cancellation, but hopefully only by a day or two. More importantly, if the Access Holder does not accept responsibility for the cancellation, responsibility falls back on the Train Operator. Again, while there are no commercial consequences, this may be acceptable, but it is unlikely to be acceptable if real consequences apply. It is again noted that an Access Holder would only be assigned responsibility for those losses for which it was found directly responsible, for example a load point failure or unavailability of coal, and does not include where a train is diverted to another load point.

The current IAHA clause 11.6 process requires ARTC to remove Train Paths from an Access Holder's Capacity Entitlement in the following allocation period. For the majority of Access Holders, the allocation period is monthly, but for some smaller Access Holders it is quarterly. The process requires the HVCCC to provide a weekly report to ARTC including its opinion where capacity has been lost that responsible parties should have Train Paths removed. This means that ARTC would need to wait for the final report for the month before it is able to confidently process any Train Path reductions, for the following month, notwithstanding that it would be possible for ARTC to process an HVCCC report from earlier in the month prior to close of the month. To clarify, if the HVCCC reports on month A, then the final report for month A will be

received by ARTC early in month B. IAHA clause 11.6 would require ARTC to remove Train Paths from an affected Access Holder for month B. Advice to the Access Holder for a reduction arising from an event late in month A could not be given until some time into month B. This may, or may not, cause significant difficulty for the affected Access Holder. An alternative would be that the removal of Train Paths was deferred until the following month (month C in this example). Related to this issue is the potential for a mismatch in timing of sanctions issued by a Terminal Operator (see discussion on this issue in 4.7 below).

Request For Comment

7. *Is the current process sufficiently timely to be effective both from the perspective of the sanction being sufficiently proximate to the cause and also not so quick as to cause the Access Holder unintended consequences?*
8. *Is it appropriate that a Train Operator must seek consent from an Access Holder for the assignment of responsibility to that Access Holder? If not, is some other mechanism suggested?*
9. *Is it appropriate that an Access Holder can unilaterally refuse to accept the assignment of responsibility? If not, what alternative mechanism should apply, noting the issue of representation or lack thereof?*
10. *If an alternative mechanism is proposed, what will be the consequences on the timing to provide an outcome?*

4.4 Attribution Of Losses To Access Holders

The current responsibility assignment process does not seek to apply responsibility beyond the immediately identified party, eg if a locomotive fails, then responsibility is assigned to the Train Operator whose train has failed. There is no attempt (and no current mechanism) to link responsibility back in some way to an Access Holder.

In the dataset for this paper, 19% of cancellations (260 from a total of 1,430(DC)) were assigned directly to Access Holders. There was a broad range of causes for these 260 cancellations but all related either to the Access Holder's load point infrastructure, coal availability or coal quality. It is likely that a number of the diversions were also related to these issues, but the available data does not allow for identification of this.

At the time of implementing the IAHA clause 11.6 mechanism, some stakeholders expressed a view that all cancellations should be assigned to an Access Holder on the grounds that this would reinforce the commercial relationship between the Access

Holder and its Train Operator and assist the Access Holder to impose discipline on the Train Operator through contractual linkages. In this way, over time, a positive incentive would arise to discourage capacity losing behaviour. However, the current cancellation allocation process is not geared towards making allocations in this way. Given the relatively small proportion of cancellations that are attributed directly to Access Holders (<20%), this calls into question the effectiveness of the current process in incentivising the reduction in capacity loss on the part of Train Operators through the operation of the AHA.

Adopting a process that assigned all cancellations to Access Holders is likely to be problematic as, for the majority of events, the linkage between the event causing the cancellation and the Access Holder would appear arbitrary.

The intention of assigning cancellations to Access Holders is that this would allow Access Holders to drive improved performance from their Train Operators and discourage competitors seeking cheaper transport options that imposed the cost of the loss of capacity on all coal chain participants. This is a matter between producers and operators but the imposition of appropriate incentives through the AHA may be an enabler for this to occur.

While there may be benefits through changes in the commercial relationships between Access Holders and their Train Operators, there may be some issues arising through to the timing of such arrangements that should be considered. For example, haulage contracts with Train Operators are being renewed at different times by different Access Holders and there is no equivalent to the Tier 1 arrangement that would allow the unilateral modification to haulage contracts. The likely result is that differing contractual arrangements would apply at any one time, even if it were possible to apply a uniform approach to the reallocation of the consequences of loss back to Train Operators (which itself is unlikely). The presence of different contractual consequences for the Train Operator might encourage counterproductive outcomes such as an inappropriate approach to volunteering cancellations or cancelling the 'wrong' train (if cancellations remains the measure), to the detriment of an Access Holder purely because of its contractual position. Notwithstanding this, it could be argued that coal producers pay the cost of coal chain losses already through one mechanism or another, and that it is up to them to devise appropriate commercial mechanisms to deal with those costs.

Request For Comment

11. *Is there value in retaining a mechanism that applies to less than 20% of the cancellations.*
12. *Is it desirable that the mechanism should apply responsibility to the Access Holder even where the Access Holder is not directly responsible for the loss of capacity?*
13. *If a broader assignment is made to Access Holders, what sort of mechanism should apply, noting that the current mechanism is unlikely to be effective and the issues raised about the unilateral assignment of responsibility earlier? Who should make the decision as to which Access Holder should bear the sanction? Should there be an appeal mechanism?*
14. *If a mechanism that allocates all losses to Access Holders is desirable, are there any Access Holder or Train Operator losses that should be excluded?*

4.5 Use Of The AHA As The Enabling Mechanism

The discussion in section 4.4 above highlights the difficulties of using the AHA as the conduit for an incentive mechanism.

The majority of losses are indirectly related to Access Holders and therefore a mechanism that is restricted to only those losses directly attributable to Access Holders will not address around 80% of losses. Notwithstanding this, it is recognised that there is not currently a single entity within the coal chain that is able to impose an effective mechanism that covers all coal chain capacity losses under the existing contractual framework.

The HVAU recognises the importance of achieving efficiency in the Hunter Valley coal chain. ARTC believes that the AHA clause 11.6 mechanism or its replacement can play an important part in providing an appropriate incentive toward achieving efficiency in the coal chain through encouraging Access Holders to value capacity that might otherwise be squandered through avoidable events.

The AHA and Tier 1 arrangement means that ARTC has some scope of deploying an incentive mechanism across the entire group of Access Holders. For practical purposes, all coal shippers have an AHA that applies to at least part of the coal

movement⁴ and ARTC could seek regulatory approval to adopt a more wide-ranging mechanism than the current AHA clause 11.6 mechanism, providing that the mechanism is capable of being managed within the boundaries of the AHA contractual relationship.

Any mechanism that is proposed under the HVAU section 5.8 process must be one that can be implemented through the AHA. This means, for example, that a solution that is reliant on a change to the current cancellation determination process (which lies outside of the AHA) will only be able to be implemented to the extent that the supporting external process is aligned with the AHA. ARTC cannot, through the mechanism of the AHA alone, impose an obligation on a party that is not a party to the contract. In that context, many of the issues that apply to the current cancellation determination process are not amenable to remedy through amendment to the AHA and should that underlying process fail for some reason, AHA clause 11.6 would not be able to function as intended. Therefore, any solution that is put forward by stakeholders must take into account the limitations inherent in using the AHA, or demonstrate how the solution can be implemented through other mechanisms.

Given the circumstances, ARTC would be amenable to applying an incentive mechanism as implementer of the result of some externally determined process. As an example, the current AHA clause 11.6 mechanism, combined with the methodology for determining the cause of capacity losses places ARTC in the role of implementing a sanction that is determined (or at least recommended) by another body, in this case the HVCCC, through a process conducted by another group, the LRSG. However, ARTC believes that it would not be in its own interests to be placed in the position where it was not only the implementer of a sanction but also the determining body. To do so would place ARTC in a most difficult position with its customers and most likely increase disputation. It might be appropriate for ARTC to be the determining body as well as the implementer if the mechanism was one which was purely objective and not amenable to dispute, however, ARTC would require strong and continued industry support to take on such a position. ARTC would prefer a mechanism where some other party was responsible for determining what sanctions should be applied and to whom, recognising that ARTC would need to retain the discretion that it currently has in the AHA clause 11.6 mechanism so that it is not placed in an untenable position should some unforeseen circumstance arise.

⁴ From time to time, some ad hoc domestic movements or movements to export through another port may not be covered by an AHA.

Request For Comment

15. *Is the AHA the most appropriate vehicle for dealing with the loss of coal chain capacity in light of Terminal loss allocation mechanisms? If not, what alternative vehicle should be used (if any)?*
16. *What role should ARTC play in identifying the responsible parties, determining the sanction and implementing the sanction.? If ARTC is not to play one or more of these roles, who should perform the role?*
17. *If the AHA is used for an enhanced mechanism:*
 - i) *Who should allocate responsibility for capacity losses and how?*
 - ii) *What level of discretion should ARTC have to apply the recommendation of another body?*
 - iii) *What mechanism should be in place to resolve disputes, noting that ARTC may have limited ability to resolve the initial assignment of responsibility?*
18. *What other arrangements are required to give effect to the proposed mechanism apart from the AHA and how would this be achieved?*

4.6 Nature Of The Sanction

The sanction arising from the AHA clause 11.6 mechanism is the removal of an Access Holder's entitlement to Train Paths. As a negative incentive, the expectation would be that this would encourage an Access Holder to bring influence to bear on its Train Operators (and its own performance in train loading) to avoid the imposition of the sanction. As the sanction arises through the AHA, and the main purpose of an AHA (from the Access Holder's perspective) is to access Train Paths, this would seem an appropriate form of sanction. It is open to question whether an incentive aimed at the removal of Train Paths is the most effective way to reduce losses. It is possible that other forms of incentive could be implemented. For example:

- A 'cost' might be attached to the loss of capacity (eg in the form of a price per Train Path). In a more sophisticated version, the money received could be distributed to affected Access Holders, though this might be difficult – see discussion below.
- An Access Holder might be given lower priority to Train Paths than affected parties. This would probably be done through the HVCCC but would need to be actuated through the AHA in order to avoid ARTC being penalised if it

meant that the Access Holder did not receive its contracted Capacity Entitlement. However, note that any action that resulted in the delay of a partly assembled cargo is likely to have a negative impact on the capacity of the coal chain as a whole and therefore would be ineffective in improving coal chain capacity.

A consequence of the removal of Train Paths is that this would allow the allocation of the 'freed up' Train Paths to another party. The mechanism, as currently designed, does not seek to direct the available Train Paths to a party that suffered as a result of the event. In practice, who receives those Train Paths would be determined by a combination of:

- each Access Holder's Capacity Entitlement, as set out in its AHA and potentially modified by the state of its contract (eg has it reached the extent of its annual entitlement, is it able to use Tolerance Train Paths etc) and any reduction through the operation of AHA clause 11.6,
- the shipping stem and requirement to assemble cargoes, as determined by the HVCCC.

It is not always clear who has 'suffered' from an event causing the loss of capacity in the sense that while trains intended to load a producer's cargo may have been cancelled or delayed and capability in the system overall reduced, that cargo is likely to be assembled more or less in its turn when capacity becomes available – it may therefore be that a cargo was delayed in loading, but it is unlikely that a cargo would be lost forever. This might mean that a producer suffers a cost, for example through increased shipping demurrage, but in a complex system such as the Hunter Valley coal chain, it will often not be clear which event, or series of events, led to the cost, or in what proportion.

Once a cargo has started to be assembled, that portion of the Terminal stockyard will be unavailable for use for any other cargo until the partly assembled cargo is completed and loaded onto a ship. Any delay in completing a cargo will therefore reduce the capacity of the coal chain. The delay in applying the removal of Train Paths until the next period means that a cargo that is partly assembled is most unlikely to be delayed by the application of the sanction.⁵ However, a mechanism that was applied

⁵ It is conceivable that an event occurring that caused a loss of capacity at the end of the month could lead to an Access Holder not completing a cargo if it had only a small remaining entitlement in the following month (particularly if the maximum of 2 Train Paths per event was removed), but given that the average cargo build time is around 4 days, it would require an extraordinary series of coincidental factors for a delay to arise, even if ARTC was able to apply the sanction immediately, which is unlikely from an administrative perspective.

more speedily might, in some circumstances, have the effect of delaying the completion of a cargo and this would be counterproductive.

The removal of an Access Holder's entitlement to Train Paths occurs in the following period. For the most part, the month following the event, but for some small producers this might be the following quarter.

The AHA clause 11.6 mechanism limits the number of Train Paths that can be removed to a maximum of:

- a) the number of cancellations reported, and
- b) 2 per event.

From the dataset, 73 out of 948 events caused 3 or more cancellations. 22 events caused more than 5 cancellations. The losses arising from events causing more than 2 cancellations are 423 cancellations (out of 1,346). If the removal of Train Paths was strictly applied to all losses, taking into account the current 2 Train Path cap, 277 Train Paths (19%) would not be deducted due to the application of the cap.

If the mechanism is intended to provide incentives to reduce the loss of capacity, then it would seem appropriate that the greatest incentive should apply to events that cause the highest losses. A cap serves to bias the impact of the incentive towards events that have the least impact, ie under the current cap an event leading to 2 cancellations potentially bears the same consequence as an event leading to 25 cancellations. It is unclear why a cap should be applied unless there is a view that applying the full consequences of the loss occasioned by an event would be too harsh (see discussion in section 5.6). The current AHA clause 11.6 mechanism is intended to apply to where losses have impacted on capacity. The clause does not mention materiality, but it could be argued that this is implied, or that the HVCCC has discretion in applying a materiality consideration in its determination of whether it should express a recommendation to ARTC to remove Train Paths. The review clause in HVAU section 5.8 certainly indicates that materiality should be taken to account when creating a new mechanism, implying that the current mechanism (at least going forwards) would be subject to materiality considerations. In this context, it could be argued that events giving rise to only 1 or 2 cancellations might not be considered material. However, it is entirely feasible that a party might continually cause events that gave rise to only 1 or 2 cancellations at a time, but cumulatively did have a material impact.

As the current mechanism has not been applied to date, it is unclear in what circumstances the HVCCC would recommend that ARTC reduce an Access Holder's Train Paths.

Request For Comment

19. *Is the removal of Train Paths from an Access Holder's Capacity Entitlement the most appropriate sanction, or is there some better incentive, bearing in mind that it would need to be applied through the AHA if it is to apply to the Access Holder?*
20. *Would it be appropriate to attempt to make any removed Train Paths available to parties negatively affected by the event? If so, how might this be achieved in practice?*
21. *Is the current cap on the number of Train Paths to remove appropriate? If not, what cap, if any, should apply, and why?*
22. *How should the concept of materiality be applied? For example, should it apply only to a certain measure of losses from each event, or should losses be considered cumulatively over a period (eg a week or a month). If so, what level should be considered sufficiently material to trigger the imposition of a sanction?*

4.7 Interaction With Terminal Measures

The HVAU section 5.8 mechanism relates to capacity losses caused by Access Holders and Train Operators and envisages a sanction being applied through the AHA. The export Terminal Operators are also putting in place mechanisms that would allocate the loss of capacity at their terminals to coal producers. The allocation of losses will result in a reduction of a coal producer's available capacity at the coal Terminal.

The coal terminals are operating under different circumstances, including different commercial arrangements to those that apply through the AHA. The measures that will be adopted at the coal terminals are not directly translatable to the operation of the Network. However, it is important that the measures that are adopted for the operation of the Network are consistent with the measures applying in the coal terminals.

In this regard, two related issues arise:

- 1) the timing of the application of the sanction, and

- 2) the potential for a double application of a sanction.

The principles of contractual alignment would require that any change in the contracted capacity for one element of the coal chain should be matched by changes in related elements. Thus a reduction in capacity through the removal of Train Paths by ARTC should ideally be reflected in a lower allocation at the relevant coal terminal, and vice versa.

As an example, PWCS currently applies its sanction, the loss of stockpile allocation, in event month + 2. This is different to the current AHA clause 11.6 process that applies the sanction in event month + 1. Even if the measures were applied in the same month, there remain some measurement issues that would lead to the potential for application in different periods for the same incident. However, these instances would be associated with the end of month processes performed by various parties in the coal chain and could be expected to be of a relatively minor concern.

Related to the differences in timing, the potential exists that an Access Holder could have capacity removed at port in one month (thus having Train Path capacity but no coal terminal capacity) and Train Paths removed in another month (and having insufficient Train Paths but sufficient coal terminal capacity) thus leading to being penalised twice for the same capacity loss.

The fact that two different processes are in operation through two different sets of contractual arrangements makes it difficult ensure that no problems arise. However, it would be of benefit to the extent that any mechanism adopted by ARTC is at least consistent with the Terminal Operator mechanisms and minimises any potential mismatches.

Two further issues are that:

- a) The events covered by the mechanisms may be different, eg the ARTC mechanism will be restricted to losses caused by Train Operators and Access Holders whereas the Terminal Operator mechanisms cover port related losses as well. This potentially goes against the contractual alignment principle.
- b) The two mechanisms may potentially allocate the cause of a capacity loss differently for the same event. Again this would give rise to a misalignment, not to mention that one or more parties might be aggrieved.

Request For Comment

23. *In proposing any mechanism, respondents should identify any benefits or disadvantages in relation to consistency with the mechanisms of the Terminal Operators in terms of timing and alignment of the change in capacity that results.*

5 ALTERNATIVE MEASUREMENTS & RELATED ISSUES

This section of the discussion paper is intended to raise several possible alternative mechanisms and further considers some of the issues. These are presented as ideas or thought provokers, not necessarily as options that ARTC is endorsing.

Request For Comment

24. *Respondents are encouraged to develop their own alternatives, or if they endorse one of the options in this section, to provide such additional input as they feel appropriate to develop the concept into a scheme that could be practically implemented.*

5.1 Commentary

In considering alternative mechanisms, the following propositions should be taken into consideration:

- a) A delay in the system generally has impacts beyond the party/resources involved directly in the event causing the delay.

For any system that relies on a flow through a common pipeline, in this case a series of load points, train sets, railway lines, dump stations and ship loaders, all with a finite capability of circumventing a blockage to the system, a delay that exceeds the system's ability to avoid the delay (either wholly or partially) will cause a series of cascading impacts on those parts of the system behind the blockage.

- b) In order to make a planned operation workable, it may be prudent to have buffers in the system. Buffers represent a loss of potential productivity, ie the asset is operated at less than its full potential, but this should be balanced against the disruption that will be caused by events where there is no ability to recover. In some cases buffers occur naturally, eg a dump station, train set or load point may deliver a higher level of capacity than strictly required but

would be uneconomic to deliver in a smaller amount (eg you can't build half a dump station and building one to a lower specification may have other system impacts). In some cases buffers arise through another system constraint, eg a train might not be able to proceed past a certain point until the train ahead of it has cleared the line. Some buffers may arise through deliberately planning a halt in the operation of an asset.

- c) Lost productivity is generally unrecoverable in a closed system, or if recoverable, only to the extent allowed by the buffering of resources in the system.

The Hunter Valley coal chain is a closed system, ie one in which the assets and resources are generally captive to the system and no additional transport resources routinely enter or exit the system. Therefore, any capacity loss is effectively permanent, eg a train that is delayed on cycle A, will not be available for its next planned cycle B, unless there is sufficient buffer time between planned cycles to overcome the delay experienced during cycle A. To the extent that the delay exceeds any buffer, future cycles will need to be deferred to accommodate that delay, thus permanently incorporating the effect of the delay. Similarly a lost slot at a dump station represents a lost opportunity to unload a train; again, while there might be sufficient capacity such that this does not cause a flow-on effect, it represents either a loss of capacity or a buffer in the system. A cargo not discharged at a Terminal today must be discharged tomorrow, displacing a cargo that might otherwise have been dumped tomorrow.

- d) In a complex system such as the Hunter Valley coal chain, there are often multiple events that result in losses. The interaction between those losses is situation dependent. The total system losses may not equate to the sum of the losses directly observable from individual events; they may be more or less.

These propositions mean that:

- As the causes of losses are not necessarily related to the party suffering the loss, it is inevitable that the mechanism must include an analysis of the causes of loss and the attribution of losses to one or more parties.
- The analysis and allocation of losses will always involve some element of judgement and subjectivity. From this it follows that the mechanism will need a decision maker.

It is less clear whether there would also need to be a right of appeal - the decision making process and identity of the decision maker may provide sufficient comfort to Access Holders that an appeal process is not required, but this may not be the case, particularly if the consequences are commercially damaging.

- In some instances losses are absorbed within the system through buffering and it may be difficult to identify what event has resulted in a loss of capacity. This may be particularly so if a mechanism is used that is dependent on determining the materiality of the loss rather than a strict loss allocation.

5.2 Vessel Departures

One view of the export coal chain is that its ultimate goal is the despatch of a loaded vessel. Assuming that proper planning processes are in place, a vessel departing later than its scheduled date and time represents a loss of system capacity. The lateness of departure could potentially be translated into a number of standard trains that have been lost based on the time lost.

It would still require analysis of why the planned loading of coal onto the vessel did not occur and the attribution of responsibility. A difficulty with such a measure is that while it would recognise a loss to the system, in most instances it would not, of itself, provide any means for linking back to the cause. Where the cause was Terminal related, this ought to be readily identifiable and excluded from the measure. Other causes would presumably be related to factors in the coal chain and amenable to the sort of mechanisms being considered in this paper, ie the allocation of the responsibility for losses caused by Access Holders or their Train Operators.

The number of trains lost can be reasonably accurately estimated through some form of standardised measure. However, without directly analysing the causes of the events which led to trains being delayed, there is no way of allocating responsibility, nor applying a useful incentive. If it is necessary to undertake such analysis, then there would seem to be little point starting at the vessel delay for the mechanism as this appears to be too remote from the cause to be useful. The measure would also be entirely focussed on export coal and could not be applied to losses caused by domestic coal Access Holders.

5.3 Dump Slots

Moving up the coal chain, a measure that is at least partially related to the timely departure of vessels is the utilisation of planned unloading opportunities at the coal

terminal dump stations ('dump slots'). The failure to use a planned dump slot represents a lost opportunity to move coal onto a stockpile. The measure excludes consideration of any losses relating to the operation of the marine side of the terminal operations, though it would still be impacted by events that impacted on dump station availability, for example a failure of the dump station itself. The measure could be applied equally to dump slots planned for domestic receival points.

This approach would still require an allocation of the loss, but this would be in the context of a plan that would identify the train service that should have used the dump slot and has the appropriate linkages back to the train operations. This would readily allow analysis of why the dump slot was missed and which events were the root cause.

A refinement of this concept might be that losses are restricted to the number of slots that are missed. This would allow for the transposition of trains so that an early train could take advantage of a slot made vacant by a late train – so while there were some delays in the system, a degree of self-correction occurs. It would also cap the losses allocated to Access Holders to the total actual losses in the system on that day. The losses might be allocated out on a pro-rata basis (ie to the extent that the system self-corrected, all losses could be mitigated proportionately), or some grading of the severity of the cause might be applied.

Dump slots lost due to events caused by the terminal itself would need to be excluded as the measure, as set out in HVAU section 5.8, is only intended to capture losses caused by Access Holders and their Train Operators. The mechanism would also need to exclude losses caused by ARTC as these are already dealt with through the True Up Test in the AHA and it would make no sense to apply such losses to the Access Holder. Some losses arise through planning errors while others are due to parties not directly associated with the Hunter Valley service providers. It may be appropriate to remove these also from the allocation mechanism, noting that any losses excluded would be socialised.

In its basic form, this mechanism would apply to all lost dump slots (excluding the exceptions noted above), ie it would consider all losses as material. This would have the advantage of avoiding subjective judgements as to what was 'material'. A less severe form might be contemplated that allowed for a level of loss that is 'forgiven' an Access Holder (eg the mechanism is only applied if the Access Holder causes more than a specified number of missed dump slots in the month) or a capping mechanism such as the one that currently exists could apply.

There are several measurement issues that would require consideration:

- When is a dump slot 'missed'? If the train arrives 10 minutes late, causing an overrun in departing the dump shed of 10 minutes, is that a missed slot? Strict adherence to slots may cause more losses than necessary. At what point is a slot missed?
- How do we deal with boundary issues such as the change into the next day? A 'missed slot' might be one where a train was due to commence unloading just prior to midnight and commenced a few minutes later just into the next day.
- Related to the above, how to measure the cumulative loss of time through a series of minor events, or the cumulative impact of events that interact leading to the loss of a dump slot.

The ILRT gathers data in real time about system performance and is well placed to provide ARTC with data as to the direct responsibility for the loss of dump slots. However, it is unclear who should determine the allocations of losses to Access Holders. This could be through a process similar to that which is currently run by the LRSG. However, the same concerns as noted earlier in this paper would apply. Notwithstanding this, it should be recalled that the AHA cannot be used by itself to obligate other parties to create or operate these external processes and any solution relying on them must identify how they will operate, and if possible how an alternative that is within ARTC's full control might operate if necessary to give effect to the scheme.

A matter for consideration is that planned dump slots may not necessarily be the constraining factor in the coal chain and perhaps the actual number of dumped trains is indicative of the actual constraints on the system.⁶ However, as this is an actual rather than a planned measure it is not helpful – rather, the planned number of dump slots would serve as a good proxy for what the constrained system ought to be capable of delivering (assuming, of course, that the plans are efficient and also that the plans reflect the full capacity of the system).

5.4 Late Trains

The use of dump slots remains one step removed from the source of the majority of losses (at least as measured through cancellations), the train operations.

⁶ Notwithstanding what is the actual current constraining factor, that factor may change from time to time (and in fact may differ for particular hauls at any particular point in time) as different service providers bring capacity on-line (or decommission capacity).

Having canvassed the problems with using cancellations as a measure, ARTC has considered what alternatives might be available. One alternative would be to measure the lateness of each train compared to its planned time over each part of its journey, eg:

- Empty departure from terminal
- Arrival at load point,
- Departure from load point,
- Arrival at terminal arrival roads,
- Completion of unloading
- Availability for next departure

Delay at each of these points would reflect some form of deviation from plan that would include not only events associated with the train itself (eg a locomotive failure), but events occurring to other parties eg a locomotive failure on another train or a load point failure. It would also include lost time due to reasons that would not currently be considered an 'event', eg a train running slower than planned section running times.

Analysis would be required for each delay to identify:

- a) the cause, and
- b) attribute responsibility to the Train Operator or Access Holder directly responsible.

If the responsible party was a track provider or Terminal Operator this would be identified and the lost time excluded from the measure.

Essentially the analysis would be the same as under the lost dump slots mechanism. The difference is that the lost time would be translated into a 'unit of forfeit' (**UF**). The UF would be some fraction of a Train Path and the UFs could be added up over the relevant period (as determined taking materiality into account) and converted to Train Paths. The final step would be to assign those lost Train Paths initially attributed to Train Operators to one or more Access Holders.

It is anticipated that there is a reasonably close correlation between lost time for trains and system losses overall (once Terminal Operators and ARTC have been excluded). Assuming that such a correlation exists, it would be possible to adopt an algorithm that translated losses into UFs and hence Train Paths. It is contemplated the algorithm would identify a UF for every x minutes of lost time. ARTC has not carried the analysis

required to confirm the assumption that there is a close correlation between lost time and a UF, but could do so if there is broad support for this mechanism.

This mechanism could be applied over different periods. For example, it could be applied daily, or the UFs could be accumulated over a month. If the UFs are to be applied in the following month, the period probably has little effect except that any capping mechanism might be differently applied.

A refinement of the above measure is that the number of UFs could be pro-rated against the number of lost dump slots, if that was considered an appropriate measure. This would limit the allocation of UFs to a maximum of actual lost slots.

ARTC collects data that will allow for in-depth analysis of train performance so it is well placed to identify losses under this measure or the lost dump slots measure.

5.5 Allocation To Access Holders

Both the lost dump slots and late trains approaches leave the process and responsibility for the allocation of UFs to Access Holders at large. It would seem that there is no direct method available that would allow the allocation of a capacity loss beyond the initial cause to an Access Holder, ie there is no obvious direct relationship between a cause related to a Train Operator and an Access Holder other than that an Access Holder has contracted with a Train Operator to provide haulage services. The fact that a train associated with a particular haul (and therefore a specific Access Holder) causes a loss of capacity will in many circumstances be a matter of happenstance.

It is not clear that any one party is well placed to make an allocation of UFs between Access Holders when the decision is unclear or arbitrary. At present such decisions are not made, therefore there is no precedent or example on which to base a process. In this context, the LRSG:

- only makes allocations to an Access Holder when
 - the Access Holder is directly deemed to be the cause of a cancellation, and
 - the Access Holder agrees to accept responsibility (otherwise the Train Operator is assigned the cancellation).
- the LRSG process is voluntary and functions through cooperation between service providers. As the consequences of the new mechanism become more visible, potentially including the evolution of new contractual relationships,

such cooperation may prove more difficult to sustain. Further, the commercial interests of the parties (eg the Train Operators) may become conflicted with a function that involved making decisions as to the assignment of UFs to Access Holders.

Whichever party took on this role would require strong and continued support from industry.

Request For Comment

25. Who should allocate UFs to Access Holders?

5.6 Capping

ARTC is of the view that the most effective application of an incentive mechanism such as is intended through IAHA clause 11.6 would work most effectively where the incentive is proportional to level of behaviour with which it is associated, in this case, conducting operations to minimise the loss of capacity both to ARTC and to the wider coal chain.

Experience suggests that some stakeholders believe that it is necessary to temper such an approach so that where an event results in excessive losses, the imposition of the negative incentive is not so harsh as to cause material damage to the Access Holder's business.

There are two competing issues involved in determining whether a cap should apply and if so what:

- a) An incentive that is reflective of the cost imposed on other coal chain participants is likely to be more effective than one in which the incentive is muted.
- b) An incentive mechanism is intended to encourage the adoption of desired outcomes. It should not imperil a business's viability.

One of the difficulties is that the allocation of lost capacity caused by a Train Operator to an Access Holder will often be arbitrary. This significantly weakens the potential effectiveness of any incentive mechanism. If the mechanism results in a change in the contractual relationships between Access Holders over time, then this arbitrariness may abate. However, for at least the medium term, it will remain, at least for some Access Holders.

To be effective, an incentive mechanism must allow changes in behaviour that will have a known effect and arbitrariness may defeat this requirement. Inability to control the underlying behaviour with any degree of certainty would be one reason why it might be appropriate to cap the impact of the mechanism.

Any decision to cap the mechanism should recognise that the costs of capacity losses, at least with respect to the cost of track access, are socialised among all Access Holders to the extent that the costs are not specifically assigned to a particular Access Holder.

Request For Comment

26. Should a cap apply to the mechanism? If so, what value should the cap have, or how should it be determined?

5.7 Appeals

The current mechanism has an implied appeal mechanism in that, if an Access Holder wishes to dispute the removal of Train Paths by ARTC, it may do so through the dispute resolution mechanism under its AHA.

The current mechanism is quite restricted in the potential removal of Train Paths and this makes it less likely that an Access Holder might raise a dispute. This is because:

- a) Train Path removals are linked to cancellations which represent a subset of capacity losses.
- b) The allocation of a cancellation to an Access Holder only occurs where:
 - i) there is a direct causal relationship between the Access Holder and the underlying event, and
 - ii) the Access Holder must volunteer to accept responsibility for the cancellation (or it reverts to a Train Operator, where, for all intents and purposes its only effect is that of moral suasion).
- c) Any removal of Train Paths would be under a recommendation from the HVCCC.
- d) Any removal of Train Paths is capped at 2 per event.

Under a broader system, if the measure of loss (eg cancellations or perhaps UFs) for which a Train Operator is responsible is allocated to Access Holders, presumably in the absence of express consent, then:

- The voluntary acceptance would no longer be part of the process.

- Many allocations would necessarily be arbitrary.
- There is the potential that the different commercial relationships applying between Train Operators and their various customers might bias the allocation of losses.

In that changed environment, there is a significant increase in the likelihood of disputation, and it may be that the AHA dispute resolution process is no longer an appropriate mechanism to deal with this.

The AHA dispute mechanism is a generalised one that is intended to accommodate infrequent matters. It is structured around the following escalating steps:

- 1) Negotiation
- 2) Mediation
- 3) Court.

There is a variation to this relating to the payment of rebates by ARTC to Access Holders which provides for:

- 1) Negotiation
- 2) Expert determination.

Neither of these mechanisms is well suited to resolving matters that might arise frequently, requiring speedy resolution.

Request For Comment

27. Should the mechanism be subject to an appeal process? If so, is a different appeals mechanism required from the current dispute resolution process in the AHA, who would be the adjudicator and how would the process work?

5.8 Timing

Notwithstanding the timing requirements set out in HVAU section 5.8, the HVCCC has indicated to ARTC that it has a keen interest in the early adoption of a mechanism that will assist in the management of poor performance and the achievement of maximum output from available capacity. The HVCCC sees the ARTC AHA clause 11.6 (or its replacement) as a key process in incentivising the achievement of targeted performance for 2013 and beyond.

To the extent that stakeholders are able to strongly support a single, well-structured proposal that meets key stakeholder outcomes, it may be possible to speed up the

process and make a submission earlier to the ACCC. ARTC is well aware of the imperative to act expeditiously and will make every effort to achieve a timely outcome, but much of the timing will be dependent on the actions of other stakeholders.

Regardless of the speed with which a submission can be made to the ACCC, the duration of the ACCC approval process will be driven to a large extent by the level of diversity of views between stakeholders. The approval process is likely to be extended if the proposed solution has the appearance of inappropriately favouring one group of stakeholders at the expense of another, or is subject to significant degree of differing views.

Request For Comment

28. In formulating their proposal, respondents are encouraged to consider how their proposal might be tailored to expedite acceptance by other stakeholders and the ACCC.

5.9 Changes To HVAU/IAHA

The ACCC approval of the HVAU and the accompanying consultation process took 3 years to complete. ARTC is aware that substantial changes to the current documents may require a further substantial consultation and approval process. The current HVAU has a term of 5 years from July 2011 and a prolonged consultation and approval process would limit the effectiveness of the changes during the life of the current HVAU. With this in mind, ARTC's preference would be to minimise any changes to the HVAU and IAHA so as to achieve as quick an implementation as possible.

The adoption of a mechanism that was based on the removal of Train Paths from an Access Holder is similar to the current IAHA clause 11.6 process and would minimise the changes required, notwithstanding that some additional machinery or other changes might need to be made. Both the lost dump slots and late trains mechanisms could be implemented with relatively modest changes to the IAHA, provided the appeals mechanism did not require complex or substantial drafting.

Notwithstanding this, there remains the requirement to deal with any associated process that lies beyond the scope of the AHA, eg any process that requires a party other than ARTC or the Access Holder to perform a role. Depending on the process this may or may not require a separate process.

APPENDIX A EXTRACT FROM HVAU & AHA

Extract From HVAU Relating To Review Of Capacity Losses

5.8 Review of mechanism to identify and assign Capacity losses

- (a) Within 12 months of the Commencement Date, ARTC will, in consultation with the HVCCC, commence a review of the policy and processes for identifying and allocating losses of Capacity caused by Access Holders and their Operators and potential incentive mechanisms to minimise such losses where they have a material impact on Capacity or Coal Chain Capacity or the Capacity entitlements of Access Holders, including those processes outlined in clause 11.6 of the Indicative Access Holder Agreement.

- (b) As part of that review, ARTC will:
 - (i) if the HVCCC agrees to conduct the industry wide review within 12 months of the Commencement Date, participate in good faith in that review and will consider any proposals arising from that review accordance with the consultation process outlined in section S.8(c);

 - (ii) invite the HVCCC, Access Holders and other Hunter Valley Coal Chain service providers to:
 - (A) provide their views of whether particular actions or omissions of Access Holders or their Operators (such as cancellation of scheduled Services) have a material impact on Capacity, Coal Chain Capacity or the Capacity entitlement of Access Holders; and

 - (B) submit proposals for a suitable framework to address any adverse impact on Capacity caused by such actions or omissions including any rules for the allocation of losses of Capacity to the responsible Access Holder,

- (c) ARTC will in good faith consider any proposals arising from the HVCCC review (if carried out) or the submissions and proposals provided to

within a specified time (which must not be less than six weeks).

ARTC within a specified time pursuant to ARTC's review (as applicable) and if ARTC reasonably determines, following consultation with the HVCCC (and further consultation with other stakeholders at ARTC's discretion) that:

- (i) particular actions or omissions of Access Holders or their Operators have a material impact on Capacity, Coal Chain Capacity or the Capacity entitlement of Access Holders; and
- (ii) a proposal received under section S.8(b), including a proposal which has been amended following consultation with ARTC and the HVCCC, meets the following criteria:
 - (A) the proposal, if adopted, would be likely to have demonstrably positive benefits in increasing the Available Capacity and allocating the impact of an event causing a Capacity shortfall to the Access Holder causing the incident or event leading to the Capacity shortfall;
 - (B) the anticipated benefits of the proposal outweigh the potential detriments of the proposal including the costs associated with implementation and monitoring of the proposal and an increase in the likelihood of disputes in assigning Capacity losses among Hunter Valley Coal Chain participants; and
 - (C) the proposal has the support of the HVCCC and the broad support of Hunter Valley Coal Chain participants including Access Holders and the Hunter Valley Coal Chain service providers,

then ARTC will, by no later than two years from the Commencement Date, submit the revised proposal, including supporting documentation to the ACCC and will seek the approval of the ACCC to vary the Undertaking to provide for the adoption of the proposal.

- (d) If the ACCC accepts the proposal submitted by ARTC under section 5.8(c) and approves the variation sought by ARTC to the Undertaking, then any amendments to the Indicative Access Holder Agreement

approved by the ACCC as part of the variation will be identified as a Tier 1 (Mandatory) Coal Provision in Schedule A:I to the Undertaking, and those amendments will be automatically incorporated into all Access Holder Agreements for Coal Access Rights, on the date the new or varied Access Undertaking comes into effect.

- (e) If ARTC decides not to submit a variation application to the ACCC under section 5.8(c), ARTC must, by no later than two years from the Commencement Date publish, subject to confidentiality restrictions, a report on its website setting out its reasons for rejecting any proposals developed or submitted under section 5.8(b).

Extract From IAHA Relating To Current Capacity Loss Incentive

11.6 Cancellation of services

- (a) ARTC will request the HVCCC to inform ARTC on a weekly basis of the total number of cancelled services assigned to the Access Holder in the previous week by the Live Run Superintendent Group, as collated and reported by the HVCCC, and whether the total number of cancellations assigned to the Access Holder in that week has had, in the reasonable opinion of the HVCCC, an impact on Capacity, Coal Chain Capacity or the Capacity entitlement of another access holder in that week.
- (b) To avoid doubt, the number of cancelled services assigned to the Access Holder, as collated and reported by the HVCCC, may include cancellations of services scheduled to be used or operated by or on behalf of another access holder where the cancellation was assigned to the Access Holder by the Live Run Superintendent Group.
- (c) If ARTC is informed by the HVCCC that the cancellations in clause 11.6(a) have had, in the reasonable opinion of the HVCCC, an impact on Capacity, Coal Chain Capacity or the Capacity entitlement of another access holder, then ARTC may remove Path Usages from the Access Holder's Base Path Usages in the Period immediately following the Period in which the cancellations had an impact on Capacity, Coal Chain Capacity, or the contractual entitlement of another access holder.
- (d) If Base Path Usages are removed in accordance with this clause 11.6(c), ARTC will delete the number of removed Path Usages from the

Access Holder's Annual Contracted Path Usages in the relevant Train Path Schedule by notice to the Access Holder. To avoid doubt, a cancellation or a reduction of Path Usages made available to the Access Holder as a result of a Capacity Shortfall under clause 6 will not constitute a cancellation under this clause 11.6.

- (e) The number of Path Usages to be removed from the Access Holder under clause 11.6(c) will:
 - (i) in respect of the number of cancellations assigned to the Access Holder due to a single event be no more than two; and
 - (ii) in total will be no more than the number of cancellations reported in clause 11.6.
- (f) If ARTC is informed by the HVCCC that the cancellations reported in this clause 11.6 have had, in the reasonable opinion of the HVCCC, an impact on Capacity, Coal Chain Capacity or the Capacity entitlement of another access holder, but ARTC has not removed Base Path Usages from the Access Holder, then ARTC will provide written reasons for its decision not to remove Base Path Usages from the Access Holder to:
 - (i) the HVCCC; or
 - (ii) if requested, the Access Holder where it is not a member of the HVCCC, subject to any confidentiality restrictions, within 10 Business Days of making that decision.
- (g) To avoid doubt, the Access Holder's obligation to pay TOP Charges will be unaffected by the removal of Base Path Usages under this clause 11.6.
- (h) Clause 14 does not apply to any determination by ARTC under this clause 11.6.
- (i) In exercising its rights under clause 11.6, ARTC is entitled to rely on information provided by, and the recommendations and opinions of, the HVCCC.
- (j) This clause 11.6 is subject to any changes arising from the review under section 5.8 of the Access Undertaking.

Relevant Definitions From IAHA

Capacity means the capability of the Network for Services, including Additional Capacity, based on and applying:

- (a) Relevant System Assumptions; and
- (b) other assumptions related to operating the Network for non-coal Services as reasonably determined by ARTC;

Capacity Entitlement means the Capacity granted to the Access Holder under this agreement in the form of Train Paths and Path Usages, or a certain number of Train Paths and Path Usages to be used in a certain period

Coal Chain Capacity means the system wide capacity of the Hunter Valley Coal Chain, including below rail, above rail and port services as agreed with the HVCCC from time to time based on the System Assumptions;

Hunter Valley Coal Chain means the system of moving coal from coal producers through a terminal in the Gunnedah, Sydney or Gloucester basin areas of New South Wales that utilise the Network and:

- (a) in relation to coal exported through an export terminal at Newcastle, includes those persons:
 - (i) who participate in marketing, mining, loading, transporting, unloading, stockpiling and shiploading activities;
 - (ii) who provide rail or port infrastructure or port services to facilitate those activities; or
 - (iii) who provide vessel or cargo management services, and
- (b) in relation to other coal movements in the Gunnedah, Sydney or Gloucester basin areas of New South Wales, includes those persons:
 - (i) who participate in marketing, mining, loading, transporting, unloading and stockpiling activities; or
 - (ii) who provide rail infrastructure to facilitate these activities;

HVCCC means the Hunter Valley Coal Chain Co-ordinator Limited or, where that body no longer exists or has been reconstituted, renamed, replaced or whose functions have

been removed or transferred to another body or agency, is the body which has the responsibility to most closely perform the functions of the first mentioned body, as reasonably determined by ARTC;

APPENDIX B ANALYSIS OF DATA

The following provides additional detail on the dataset used in the preparation of this discussion paper. Some of the information is summarised or otherwise disguised to maintain confidentiality.

DC refers to where the cancellations include a double count. This arises due to some cancellations being attributed to more than one cause and/or responsible party. While the double count has been removed from some statistics, it cannot be removed from those that rely on responsible party or cause without further modifying the statistics. Split allocations occur in 73 cancellations in the data set (5%). The inclusion of the double counts does not alter the conclusions that can be drawn from the dataset. Double counting only affects trains and not tonnes as these are split proportionally between the parties or causes when a cancellation is split.

Whole Of Dataset

First date in data	1/01/2012		
Last date in data	24/08/2012		
No. of days in year in dataset	237		
No. of days with cancellations	221		
No. of days no cancellations	16		
No. of events	948		
No. of cancellations (excl double count)	1,346		
No. of cancellations (incl splits)	1,430	Tonnes	10,249,047
Average cancellations per event	1.5		
Cancellations Per Day			
Minimum	0	No. of days	16
Max	23	No. of days	1
Mean (DC)	5.7		
Mode (DC)	3.0		
Standard Deviation (DC)	3.8		

Loss By Access Holder (DC)

Customer	Cancellations	Tonnes Lost	%
Not Attributed To Access Holders	1,170	8,268,997	81%
Access Holder A	54	418,950	4%
Access Holder B	49	404,250	4%
Access Holder C	46	342,100	3%
Access Holder D	32	266,450	3%
Access Holder E	25	204,700	2%
Access Holder F	23	147,800	1%
Access Holder G	16	98,000	1%
Access Holder H	7	32,400	0%
Access Holder I	3	25,500	0%
Access Holder J	2	17,000	0%
Access Holder K	2	14,400	0%
Access Holder L	1	8,500	0%
Total	1,430	10,249,047	100%
Attributed To Access Holder	260	1,980,050	19%
Not Attributed To Access Holder	1,170	8,268,997	81%

Loss By Service Provider (DC)

Service Provider	Cancellations	Tonnes Lost	%
ARTC	174	1,249,666	12%
Train Operators	863	6,103,482	60%
Terminal Operators	111	778,224	8%
Access Holders (Load Points)	260	1,980,050	19%
Other	22	137,625	1%
Total	1,430	10,249,047	100%
LRSB Members	1,148	8,131,372	79%
LRSB Non-members	282	2,117,675	21%