

**NSW MINERALS COUNCIL  
HUNTER RAIL ACCESS TASK FORCE**

**RESPONSE TO**

**AUSTRALIAN COMPETITION AND  
CONSUMER COMMISSION**

**ISSUES PAPER**

**REGARDING**

**AUSTRALIAN RAIL TRACK CORPORATION**

**HUNTER VALLEY COAL NETWORK  
ACCESS UNDERTAKING**

**ATTACHMENT 3  
REMAINING MINE LIFE**

**July 2009**

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## ABBREVIATIONS USED IN THIS DOCUMENT

ARTC	Australian Rail Track Corporation
HVAU	ARTC's Draft Hunter Valley Access Undertaking submitted to ACCC
HRATF	Hunter Rail Access Task Force
HVCC	Hunter Valley Coal Chain
HVCCC	Hunter Valley Coal Chain Coordinator
HVCCLT	Hunter Valley Coal Chain Logistics Team
HVCN	Hunter Valley Coal Network
NSWMC	NSW Minerals Council
NSWRAU	NSW Rail Access Undertaking
RAB	Regulatory Asset Base
RML	Remaining mine life

## 1. INTRODUCTION

This submission is Attachment 3 to the NSW Minerals Council (the “**NSWMC**”) response to the Australian Competition and Consumer Commission’s (the “**ACCC**”) Issues Paper regarding the Australian Rail Track Corporation’s (the “**ARTC**”) Hunter Valley Coal Network Access Undertaking (the “**HVAU**”).

The NSWMC is making this submission on behalf of the Hunter Rail Access Task Force (the “**HRATF**”), an associated group comprising all 14 Hunter coal producers using ARTC’s Hunter Valley Coal Network (the “**HVCN**”).

## 2. NSWMC POSITION

The NSWMC submits that a Remaining Mine Life (“**RML**”) of at least 30 years should be used to determine the depreciation rates to apply to the HVCN Regulatory Asset Base (“**RAB**”) from 1 July 2009, irrespective of whether the RML is determined on a Network or system-wide basis or for each of the three access Pricing Zones proposed for the HVCN by the ARTC.

An RML of at least 30 years would be consistent with the system-wide RML of 30 years (from 1 July 2009) in IPART’s draft determination for its 2009 Review of the NSW Rail Access Undertaking. IPART’s draft determination is consistent with the RML of 40 years (from 1 July 1999) it determined in 2001 and the RML of 35 years it determined in 2004.

The HVAU provides for an RML to be determined for each of the three access Pricing Zones in the HVCN. The three RMLs proposed by the ARTC and its consultant, Booz and Co, are substantially less than the system-wide RML determined by IPART. The ARTC/Booz RMLs, i.e.

Pricing Zone 1: 24.1 years  
Pricing Zone 2: 21.8 years  
Pricing Zone 3: 20.2 years,

are consistent with the system-wide RML of 22.8 years proposed by the ARTC/Booz to IPART for its 2009 Review and rejected by IPART in its draft determination.

The NSWMC submits that the ARTC/Booz RMLs are unrealistically low because the methodology proposed in the HVAU is inappropriate and that the RMLs proposed by ARTC/Booz are contrary to other forecasts, data and determinations. The NSWMC considers that the ARTC/Booz RMLs are:

- based on a unjustified forecasts of production growth and a flawed assessment of reserves;
- incompatible with a basic characteristic of the Hunter coal industry i.e. that additional reserves will be proven in future from the large coal resource base serviced by the HVCN; and
- inconsistent with past practice and regulatory certainty.

The NSWMC submits that the ACCC should not accept the basis for determining the RML proposed in the HVAU nor the 3 RMLs proposed by the ARTC/Booz. The HVAU should be amended to provide a realistic basis for determining the RML and an RML of at least 30 years should be determined for each Pricing Zone.

The reasons for the NSWMC’s position are set out in more detail in section 3 of this submission and supported by the analysis in sections 4, 5 and 6 of the submission.

## 3. REASONS FOR NON-ACCEPTANCE OF HVAU

### 3.1 Inappropriate RML Methodology

For the purposes of calculating allowable depreciation, the methodology proposed for determining the useful life of a segment or group of segments (as set out in clause 4.6 (b) (i) of the HVAU):

- involves an averaging mechanism across all mines that utilise each of the three access Pricing Zones of which that segment or group of segments forms part, rather than the remaining mine life of the mines that actually utilise that segment (or group of segments); and
- moves away from the approach used by IPART to determine the RML under the NSW Rail Access Undertaking in 1999/2001, 2004 and in its draft 2009 decision. IPART determined a single, system-wide RML rather than separate RMLs for the three access Pricing Zones proposed in the HVAU.

The NSWMC notes that the methodology in clause 4.6 (b) (i) may lead to allowable depreciation occurring at a greater rate, or a lesser rate, than would be the case if allowable depreciation were determined:

- by reference to actual usage of each segment or groups of segments;
- on a system-wide basis or on different Zone boundaries (as demonstrated by the three RMLs proposed by the ARTC/Booz differing from the system-wide RML which the ARTC/Booz proposed to IPART for its 2009 Review).

For the calculation of depreciation, clauses 4.6 (b) (ii) and (iii) provide that the useful life for the segment or group of segments should be determined having regard to the average mine production levels anticipated during the 10 year term of the HVAU and marketable coal reserves estimated for each mine existing at the time of the determination or expected to commence during the following 5 year period.

The NSWMC notes that the methodology in clauses 4.6 (b) (ii) and (iii) moves away, in an even more critical way, from the methodology used by IPART to determine the RML under the NSW Rail Access Undertaking. The IPART methodology was based on advice from the NSW Department of Mineral Resources that the best and simplest method for estimating RML was to divide the current marketable reserves by the current production rate. Under clause 4.6 (b) (ii) and (iii), the RML is based on forecasts of future production and estimates of current marketable reserves of existing mines and those expected to commence in the next 5 years.

The NSWMC submits that the methodology in clause 4.6 (b) (i) of the HVAU needs careful consideration before it is accepted by the ACCC. The methodology in clause 4.6 (b) (ii) and (iii) should not be accepted as it is not internally consistent, will artificially reduce any RMLs determined under the HVAU, and has incorrectly reduced the RMLs proposed by the ARTC/Booz.

In this context, the NSWMC considers that the three RMLs proposed by ARTC/Booz for the three Pricing Zones are unrealistically low. The methodology used is inappropriate and the resulting forecasts, assessments and RMLs are contrary to other forecasts, data and regulatory determinations, as outlined in the following sections of this submission.

### **3.2 Unjustified Forecast of Production Growth**

The NSWMC submits that the methodology in the HVAU and the ARTC/Booz forecasts of production have resulted in unprecedented increases in future production which are hypothetical and cannot be justified.

The LECG Report prepared for IPART considered the ARTC/Booz forecasts excessive. The ARTC/Booz forecasts also substantially exceed the historical rate of growth, the committed and even the planned infrastructure capacity and the forecasts of NSWMC's consultant, Wood Mackenzie, and other independent third parties such as ABARE.

The Wood Mackenzie and ABARE forecasts take into account growth in aggregate market demand rather than using the ARTC's more optimistic approach of just summing the growth aspirations of individual coal producers, each assuming it will capture available markets in preference to its peers.

Moreover, the ARTC/Booz forecasts, which the NSWMC understands were made in mid 2008, have already been superseded by significantly lower forecasts provided by all the producers to the industry logistics coordination group, the Hunter Valley Coal Chain Logistics Team, in March 2009.

The NSWMC submits that a realistic forecast of the growth expected in production will not be available until the Hunter coal producers are able, and required, to secure track and port terminal access under long term take or pay contracts. This will be in the first few years after the Long Term Solution for access to, and expansion of, the port terminals at Newcastle is implemented when the port terminal and rail infrastructure providers start committing to expansions to meet the contracted growth in throughput. Contracted, take or pay infrastructure capacity will be the most realistic indicator of future production growth.

Further, the Booz report on the proposed RMLs contains numerous inaccuracies in the data it uses and it is impossible to tell from the report whether the forecasts of production have been made in accordance with clause 4.6 (b) (ii) of the HVAU.

The Wood Mackenzie forecasts of production are set out in section 4 of this submission and the NSWMC's detailed comments on the deficiencies of the ARTC/Booz forecasts are set out in section 5.

### **3.3 Flawed Assessment of Reserves**

The NSWMC submits that the methodology in the HVAU and the ARTC/Booz assessments of marketable coal reserves are also flawed.

As both Wood Mackenzie and LECG have pointed out, it is not valid to exclude identified potential new mine developments, such as Caroona, Watermark and Maules Creek, as ARTC/Booz have, on the grounds that they may not be developed within the first 5 years of the HVAU. Wood Mackenzie's forecasts include development of all three mines in the 2014-2020 time frame.

The NSWMC considers that it is completely inconsistent for ARTC/Booz to forecast growth in production over the 10 year Term of the HVAU and assume port terminal capacity will expand to well above the committed and even the planned maximum capacity of the current terminals but exclude specific projects and resources that are expected to supply that production growth and that will prove up further marketable reserves to underpin that growth beyond the first five year period of the HVAU.

The Wood Mackenzie assessments of reserves are set out in section 4 of this submission and the NSWMC's more detailed comments on the problems with the ARTC/Booz assessments are set out in section 5.

### **3.4 Incompatibility With A Basic Characteristic of the Hunter Coal Industry**

The NSWMC submits that there is an even more fundamental flaw in the methodology in the HVAU and the RMLs proposed by ARTC/Booz. They are incompatible with a basic characteristic of the Hunter region coal industry i.e that additional reserves will be proven in future from the large coal resource base serviced by the HVCN.

The methodology in the HVAU and the RMLs proposed by ARTC/Booz do not allow for the extension of the lives of existing mines and the development of other new mining projects, and for the accompanying increase in marketable reserves that coal producers will prove up from the resource base in order to economically justify those mine extensions and new mining developments. They do not recognise that the terms of mining leases are often initially limited to periods (e.g. 21 years) which are less than the ultimate reserve life and that the terms are, subsequently, extended. They do not take into account the practice of coal producers to use capital efficiently by only expending funds to prove up reserves on their mining tenements when those reserves are needed to extend mine lives and the terms of leases or to plan and commit new mining developments.

The HVAU methodology and the ARTC/Booz RMLs ignore this demonstrated characteristic of the Hunter region coal industry and the very large coal resource base in the Sydney and Gunnedah geological basins identified by the NSW Department of Primary Industries. They exclude the substantial additional and new marketable reserves can be expected to be proven from this resource base in future to meet both growing and longer term export market demand. An increase in marketable reserves from current levels will be a source, and natural corollary, of increased production rates in the Hunter region coal industry.

The NSWMC considers that it is completely inconsistent for ARTC/Booz to forecast dramatically increased production without giving corresponding weight to the potential for large increases in marketable reserves and new mining projects to be identified from the very large coal resource base serviced by the HVCN. The original approach to determining RMLs recommended by the NSW Department of Mineral Resources provided a de facto allowance for this industry characteristic.

The NSWMC's view is supported by the assessments of Wood Mackenzie set out in section 4 of this submission. It is also validated by the growth in recoverable reserves in the coalfields serviced by the HVCN which has been reported by the NSW Department of Primary Industries since IPART's original determination of the RML to apply under the NSW Rail Access Undertaking from July 1999. This analysis is set out in section 6 of this submission.

### **3.5 Loss of Regulatory Certainty**

The NSWMC submits that, as well as being flawed, the RMLs proposed by the ARTC/Booz are inconsistent with past practice and regulatory certainty.

ARTC/Booz is proposing a substantial decrease in the three RMLs from the RML determined by IPART and applying to the HVCN for the last 10 years. If accepted by the ACCC, there would be a loss of regulatory certainty and the resulting substantial increase in depreciation rates would have a significant negative financial impact on Hunter coal producers which would be:

- unjustified in the circumstances, as shown in the previous subsections;
- inequitable between past and current users of the HVCN and between current and future users (when the RML is eventually extended to the actual life); and
- economically inefficient in imposing an excessive depreciation cost on the users.

The NSWMC submits that there is no valid reason to make such a change.

NSWMC therefore has supported IPART's proposal for a 30 year RML in its June 2009 Draft Decision in relation to the NSW Rail Access Undertaking. In particular, we agree with IPART's adoption of the advice provided by its adviser, LECG, in relation to effect of coal chain capacity constraints in restraining production growth; that it is invalid to exclude large new mine projects in the Gunnedah Basin; and that these factors alone indicate that the Remaining Mine Life for the HVCN should be at least 30 years.

In fact, the NSWMC believes that any balanced assessment, with realistic estimates of potential production growth and reasonable estimates of potential reserves growth, would result in RMLs in excess of 30 years.

Therefore the NSWMC believes that the IPART approach of maintaining an RML or RMLs consistent with previous determinations is a more appropriate approach to determining the RML(s) than the methodology in the HVAU and the values proposed by the ARTC/Booz. A consistent RML or RMLs will better reflect the circumstances applying to the HVCN over the first five years of the HVAU, including both the existing assets and the ARTC's projected investment over the period.

Moreover, review of the RMLs five years after the HVAU commences will provide a reasonable opportunity to more effectively assess the RMLs in the light of:

- the long term take or pay infrastructure contracts that are actually entered into under the new track and port terminal access arrangements; and
- the delineation and development of new production sources and the rate of growth in marketable reserves over the next 5 years.

It is therefore essential that the HVAU ensure the opportunity for a reassessment of the RMLs five years after the HVAU commences.

#### 4. WOOD MACKENZIE ASSESSMENT OF HUNTER COAL SUPPLY

The NSWMC's position is supported by an assessment the future supply of coal from the Hunter region prepared by our expert consultant, Wood Mackenzie Pty Ltd, which is summarised in this section of the submission.

Wood Mackenzie's assessment covers all the existing coal mines as well as a substantial number of prospective future mines in the Hunter region that are serviced by the HVCN. The region includes areas to the west of the Hunter Valley serviced by the Muswellbrook to Ulan rail line (all these mines are in the Sydney Geological Basin) and the Muswellbrook to Narrabri rail line (these mines are in the Gunnedah Geological Basin).

Wood Mackenzie has made detailed forecasts of the production of coal from the existing and prospective Hunter region mines over the medium term, based on supply-demand modelling, and forecasts of the marketable reserves used for that production. It has also assessed the potential longer term demand for Hunter region coal and supply from additional coal resources and new mine projects.

Wood Mackenzie's view of future coal supply from the Hunter region is an independent one based on its economic modelling of supplier costs and margins for each mine or project (using its Global Economic Model of coal prices, inflation and exchange rates) combined with its lowest cost modelling of trade flows (using its International Coal Trade Model). The current horizon of the supplier modelling is 2020 and of the trade modelling is 2025.

##### 4.1 Production and Exports

Wood Mackenzie's modelling forecasts that:

- Hunter region coal production and export profiles for the period 2008 to 2020 will be robust. Production and export volumes from 37 existing operations will continue to grow from 2008 levels and Wood Mackenzie has identified a strong outlook of 20 major new mine projects in the project pipeline;
- although coal exports through the port of Newcastle are currently limited by the capacity of the logistics chain (the Hunter Coal Chain) to about 90Mtpa, new investment will lift infrastructure capacity substantially
  - port terminal expansions at PWCS and NCIG will lift effective capacity to 120Mtpa in 2010 and 190Mtpa by 2015 (headline or nameplate capacity of 211Mtpa with an effective utilisation rate of 90%)
  - rail capacity expansions will lift effective capacity to 145Mtpa in 2010 and 181Mtpa from 2012;
- coal exports through the port of Newcastle will grow at over 5% compound annually
  - exports will grow to about 165Mtpa by 2015 and about 175Mtpa from 2020 with all the growth coming from increased thermal coal exports
  - exports from existing operations will increase from current levels (around 90Mtpa) to over 115Mtpa in the 2012 to 2015 period
  - new projects will account for over 45% of exports by 2020
  - supply from the Gunnedah Basin will increase in importance growing from just under 5Mtpa in 2008 to around 23Mtpa in 2020, increasing its share of exports from 5% to 15%;
- there is significant additional demand for Newcastle thermal coal supply in the seaborne market, particularly in the 2013-2017 period
  - any significant incremental Newcastle thermal coal supply will be taken by the market, which increases the viability of new project commencement;
- production and exports will continue at 2020 levels, at least, until 2025 (the current horizon of Wood Mackenzie's International Coal Trade Model).

Based on the above modelling, Wood Mackenzie's assessment of Hunter coal supply reflects the following forecasts of infrastructure capacity and coal production from Hunter region mines using the HVCN:

- infrastructure system capacity constrained at 180Mtpa from 2013;
- export production growing from around 90Mtpa in 2009 to around 175Mtpa in 2020 and maintaining that level to 2025 (the current model horizon);
- Sydney Basin projects accounting for 78% of the production growth from new projects by 2020;
- supply from the Gunnedah Basin emerging in importance in the 2016-2020 period and accounting for 22% of new project production by 2020 (17Mtpa). The three 'prospective mines' excluded from the ARTC/Booz preferred case, Caroon, Maules Creek and Watermark, account for over 75% of the forecast production from the Gunnedah Basin by 2020.

## 4.2 Reserves

Wood Mackenzie's assessment of the Hunter coal supply is based on its independent assessment of the current coal reserve base. The reserve base in Wood Mackenzie's Global Economic Model is significant and is dominated by thermal coal reserves and by existing operations rather than emerging projects: New projects only consumed to 2020

- marketable reserves for the existing mines and projects in the production forecasts to 2020 currently total 3.8 billion tonnes comprising 3.2 billion tonnes of thermal coal and 600 million tonnes of metallurgical coal;
- marketable reserves, particularly from emerging projects and in the Gunnedah Basin, are expected to eventually be much larger

At Wood Mackenzie's production rates, even the currently estimated marketable reserves of 3.8 billion tonnes would last for approximately 24 years.

However, Wood Mackenzie's view is that, as time passes and the reserves of existing mines and currently identified projects start to deplete, extensions of their marketable reserves will be identified from the other coal resources on the leases and new mining tenements. In addition, new coal mining projects will be identified from the large, as yet unproven coal resources to the west and northwest of the Hunter Valley, particularly in the Gunnedah Basin. While these additional marketable reserves and additional new mining projects have not yet been delineated and proven, it is likely that they will extend the RML of Hunter region coal to at least 30 years.

This approach is compatible with the NSW Rail Access Undertaking which provides for the useful life of the relevant rail infrastructure to be determined with reference to the remaining mine life of the mines using the network. It is clear that "mines using the network" must include not only mines currently using the network but also new mines, based on additional marketable reserves identified from the resource base, which will use the network when they come into production.

## 5. NSWMC COMMENTS ON ARTC/BOOZ RML PROPOSALS

The RMLs proposed by ARTC/Booz are weight averaged by production and reflect, among other things, near term infrastructure capacity constraints; very rapid infrastructure expansion; high subsequent coal production levels; and the exclusion of three prospective mines in the Gunnedah Basin and other prospective mining projects and resources in the Hunter region.

NSWMC's views on the production forecasts and reserve assessments used by ARTC/Booz are set out in Sections 5.1 and 5.2 below.

### 5.1 Production Forecasts

In section 3.2 of this submission, the NSWMC outlined the deficiencies that it sees with the methodology and forecasts of future production used by the ARTC/Booz to determine the RMLs. More specifically, NSWMC submits that:



- it is not appropriate to assume, as the ARTC/Booz appear to have done, a Hunter Coal Chain Capacity and production rate beyond the maximum planned capacity of the current port terminals, PWCS and NCIG, which is limited by the space available. This is potentially 211Mtpa from 2013 at the earliest although, at this stage, only investment projects to expand total capacity to 143Mtpa have been committed by the terminal owners. Even assuming the further investments are committed, Wood Mackenzie estimates the effective capacity will only be 90% of the headline or nameplate capacity, i.e. 190Mtpa, from 2015.

Despite this, Figure 3 of the Booz Report entitled "Mine Life Assessment - Hunter Valley Region" (dated 23 April 2009 and submitted to the ACCC) shows Coal Chain infrastructure capacity growing to about 240Mtpa by 2013 and 260Mtpa by 2024 based on the assumption that "both the NSW Government and the coal industry will work to ensure that the Hunter coal chain capacity will be capable of meeting demand". This breath-taking assumption is completely inconsistent with the ARTC/Booz assessment of reserves which does not include any future mine developments and specifically excludes 3 large prospective mines on the grounds that their production estimates and start dates "are considered extremely speculative";

- it is also not appropriate to assume a production rate beyond the effective rail track capacity that will result from ARTC's investment in the same period. This capacity is not clear from the ARTC/Booz proposal or ARTC's response to IPART's query on this matter in January. It could be that the capacity resulting from that investment will be lower than the port terminal capacity. Current track capacity appears to be limited to about 100Mtpa and even assuming ARTC makes the large investments planned, Wood Mackenzie estimates the effective capacity will only be about 180Mtpa, from 2012;
- finally, it is possible that production will be less again than the infrastructure capacity, at least in the short to medium term. Wood Mackenzie estimates that production will grow to 165Mtpa by 2015 and 175Mtpa from 2020. ABARE's projections are of a similar order of magnitude and both projections are more consistent with historical export growth rates than the apparent ARTC/Booz forecast.

Moreover, it has been difficult to ascertain the forecast production rates used in the ARTC/Booz proposal on RMLs:

- as stated above, Figure 3 of the Booz Report submitted to the ACCC (which was first submitted to IPART in December 2008) shows Coal Chain infrastructure capacity growing to about 240Mtpa by 2013 and 260Mtpa by 2023. The implication was that production will grow to levels approaching this capacity;
- in response to IPART's query on behalf of NSWMC in January 2009, ARTC provided a graph of the forecast level of coal production moving to Newcastle on the HVCN "during the regulatory period" that it assumed in the RML calculation. The graph showed the annual production increasing from about 110Mtpa in 2009 to about 245Mtpa in 2014, including about 110Mtpa coming from the mines in Pricing Zones 2 and 3;
- in the IPART Roundtable on 1 April 2009, ARTC said that the graph in its December Submission showed "capacity, not necessarily the forward production". ARTC said it thought the highest production got to was 211Mt;
- in a further submission to IPART on 9 April 2009, ARTC/Booz said that, for the option excluding the Caroon, Maules Creek and Watermark developments, the annual level of production reaches 211Mtpa in 2013 and when these three projects were included the annual production level reaches about 230Mtpa in 2016;
- in Booz's preferred Option B in Annex C of the Booz Report submitted to the ACCC on 23 April 2009, the average production rates for each existing mine implied by their mine reserves and mine life data total 222 Mtpa including 96 Mtpa coming from Pricing Zones 2 & 3

Further, it appears the individual producer forecasts on which ARTC/Booz reportedly based their mine life forecasts were made by producers in mid 2008, the height of the boom in the coal market. NSWMC understands that the March 2009 producer forecasts are significantly lower, totaling about

190Mtpa in 2013 and only reaching 220 Mtpa by 2018. As discussed in section 3.2 of this submission, it is probable that future individual producer forecasts will be lower again, as market demand in the wake of the global economic downturn becomes clearer and coal producers are required to enter long term take-or-pay contracts for future infrastructure capacity under the new arrangements for access to the port terminals commencing from 1 January 2010.

Considering all the above concerns, the NSWMC submits that, although the total annual production levels over the period assumed by ARTC/Booz in its submission are not clear, they are certainly significantly above the committed and even the potential infrastructure capacity and well above Wood Mackenzie's independent forecasts of total production based on its detailed supply/demand modeling over the period. Assuming a more realistic production forecast, the RML will be significantly longer.

Finally, the NSWMC notes two other critical deficiencies in the production forecasting methodology and data in the Booz report:

- it does not show the forecast average production level for each year of the 10 year Term of the HVAU for the individual mines or even the totals for all the mines for each year. Without these forecasts it is impossible to determine whether the RML proposed by the ARTC/Booz has been determined in accordance with clause 4.6 (b) (ii) of the HVAU; and
- it contains numerous inaccuracies in relation to the mines, prospective mines, implied production levels, reserves and remaining mine lives and needs to be completely reviewed by an expert in this field.

Unless these deficiencies are rectified and appropriate RMLs determined, the NSWMC submits that the HVAU proposed by the ARTC/Booz cannot be accepted by the ACCC.

## 5.2 Reserve Assessments

The Wood Mackenzie assessment summarized in section 4 of this submission highlights the deficiencies in the ARTC/Booz submission in relation to new projects and marketable reserves in the Hunter region. NSWMC considers that the prospective marketable reserves at existing mines and new mining developments are understated in the assessment by ARTC/Booz. NSWMC submits that

- the prospective mines at Caroona, Maules Creek and Watermark, excluded by ARTC/Booz, should be included in the determination of RML. Including these mines would increase increases the proposed ARTC/Booz RML to from 22.8 to 25.5 years, even at the production rates assumed by ARTC/Booz; and
- other marketable reserves, at existing mines and the other 17 prospective mines so far identified by Wood Mackenzie and not included in the ARTC/Booz Submission, should be included in the determination of RML. Including these reserves and using a more realistic production forecast can be expected to extend the RML to at least 30 years.

## 6. RESERVE INCREASES SINCE 1999 AND THE EFFECT ON RESERVE LIVES

In section 3 of this submission, the NSWMC submitted that new reserves will continue to be defined and proved for both existing mines and prospective mines from the large coal resources in the Sydney and Gunnedah Basins serviced by the HVCN and that this characteristic of the Hunter region coal industry justifies a RML of at least 30 years for the HVCN.

The NSWMC's view is validated by the increase in recoverable coal reserves in the various NSW coalfields over the seven year period between 30 June 1999 (the point at which IPART determined an initial average remaining mine life of 40 years for the Hunter coal rail network under the NSW Rail Access Undertaking) and 30 June 2006 (the latest point in time for which the NSW Department of Primary Industries has published NSW coal reserve data).

The 30<sup>th</sup> June 1999 data is sourced from in the 2001 Coal Industry Profile published by the then NSW Department of Mineral Resources and the 30<sup>th</sup> June 2006 data is sourced from in the 2008 Coal Industry Profile published by the NSW Department of Primary Industries.

## 6.1 Increase in Recoverable Reserves

Table 1 below shows that, over the seven year period, recoverable reserves in the Hunter, Gloucester and Gunnedah coalfields, for which all export coal is railed on the HVCN, increased by a combined 1,709 Mt (34%) after raw coal production of 692 Mt over the period. Including this production, recoverable reserves in those coalfields increased by 2,401Mt (47%) over the period.

In the Newcastle and Western coalfields, significant portions of which are also serviced by the ARTC's HVCN, a similar trend can be seen.

NSW Coalfields	Recoverable Coal Reserves (Mt)		Raw Coal Production (Mt)
	At 30 June 1999	At 30 June 2006	1999/00 to 2005/06
	Hunter	4260	5101
Gloucester	20	18	NA
Gunnedah	760	1630	NA
<b>Sub-total</b>	<b>5040</b>	<b>6749</b>	<b>692</b>
Newcastle	1790	1822	129
Western	1250	1793	119
Southern	870	761	84
Oatlands	1120	1280	0
<b>Total</b>	<b>10070</b>	<b>12405</b>	<b>1024</b>

## 6.2 Effect on Indicated Reserve Lives

Table 2 below shows the indicated reserve lives in years for the NSW coalfields at the beginning and end of the same seven year period. The indicated reserve life at 30 June 1999 was determined by dividing the Recoverable Coal Reserves at 30 June 1999 (in Table 1) by the Raw Coal Production in 1999/00 (in Table 2) and the indicated reserve life at 30 June 2006 was similarly determined by dividing the Recoverable Coal Reserves at 30 June 2006 by the Raw Coal Production in 2006/07.

Table 2 shows that, notwithstanding both the substantial quantity of reserves consumed and the substantial increase in the annual production rate over the seven year period, the indicated reserve life increased slightly for the Hunter, Gloucester and Gunnedah coalfields and for the Newcastle coal field. Although the indicated reserve life for the Western coalfield was reduced by a small amount, it remained substantially above that for the Hunter, Gloucester and Gunnedah coalfields and the overall average of the coalfields serviced by the ARTC's Hunter coal network remained essentially the same.

NSW Coalfield	Raw Coal Production (Mtpa)		Indicated Reserve Life (Years)	
	1999/00	2006/07	At 30 June 1999	At 30 June 2006
	Hunter	NA	NA	NA
Gloucester	NA	NA	NA	NA
Gunnedah	NA	NA	NA	NA
<b>Sub-total</b>	<b>86.7</b>	<b>114.5</b>	<b>58</b>	<b>59</b>
Newcastle	20.1	20.7	89	90
Western	14.3	21.7	88	83
Southern	11.8	13.4	74	57
Oatlands	0	0	NA	NA
<b>Total</b>	<b>132.9</b>	<b>170.3</b>	<b>76</b>	<b>73</b>

Table 2 also shows that, even if there is a substantial further increase in production, there are no further increases in reserves and some of these recoverable reserves are ultimately not economic, the

indicated reserve life for the coalfields serviced by ARTC's Hunter Coal Network will still be at least 30 years.

Moreover, if further recoverable reserves are proven at any reasonable rate compared to the production rate, as they have been over the last seven years for which data is available, the indicated reserve life will remain well above 30 years.