



AUSTRALIAN RAIL TRACK CORPORATION LTD

**1 JANUARY TO 31 DECEMBER 2013  
SUBMISSION**

to

**AUSTRALIAN COMPETITION & CONSUMER  
COMMISSION**

in respect of

**HUNTER VALLEY ACCESS UNDERTAKING**

**ROLL FORWARD ASSET BASE  
CEILING TEST  
UNDERS AND OVERS ACCOUNT**

**MAY 2014**



# CONTENTS

<b>1.</b>	<b>INTRODUCTION &amp; BACKGROUND</b> .....	<b>3</b>
1.1.	HUNTER VALLEY COAL NETWORK ACCESS UNDERTAKING REQUIREMENTS .....	3
1.2.	FORM OF THIS SUBMISSION .....	4
<b>2.</b>	<b>RAB ROLL FORWARD</b> .....	<b>6</b>
2.1.	COMPONENT CALCULATION .....	6
2.2.	COMPONENT VALUES .....	7
2.2.1.	<i>RAB Start (RAB<sub>t-1</sub> start)</i> .....	7
2.2.2.	<i>Rate of Return (RoR)</i> .....	8
2.2.3.	<i>Revenue [Out-turn Revenue<sub>t-1</sub>]</i> .....	8
2.2.4.	<i>Operating Expenditure [Out-turn Opex<sub>t-1</sub>]</i> .....	8
2.2.5.	<i>Net Capital Expenditure [Net Capex<sub>t-1</sub>]</i> .....	8
2.3.	OUTCOME AND CLOSING VALUES .....	9
<b>3.</b>	<b>RAB FLOOR LIMIT ROLL FORWARD</b> .....	<b>10</b>
3.1.	COMPONENT CALCULATION .....	10
3.2.	COMPONENT VALUES .....	11
3.2.1.	<i>RAB Floor Limit Opening Value [RAB Floor Limit<sub>t-1</sub> start]</i> .....	11
3.2.2.	<i>Consumer Price Index [CPI<sub>t-1</sub>]</i> .....	11
3.2.3.	<i>Net Capital Expenditure [Net Capex<sub>t-1</sub>]</i> .....	11
3.2.4.	<i>Depreciation [Depreciation<sub>t-1</sub>]</i> .....	12
3.3.	OUTCOME AND CLOSING VALUES .....	12
3.4.	PRICING ZONE 3 RAB AND RAB FLOOR LIMIT COMPARISON .....	13
<b>4.</b>	<b>CAPITAL EXPENDITURE</b> .....	<b>14</b>
<b>5.</b>	<b>DISPOSALS</b> .....	<b>16</b>
<b>6.</b>	<b>CONTACT DETAILS - STAKEHOLDERS</b> .....	<b>17</b>
<b>7.</b>	<b>CEILING TEST</b> .....	<b>18</b>
7.1.	COMPLIANCE SCOPE.....	18
7.2.	ACCESS REVENUE .....	19
7.3.	FULL ECONOMIC COST.....	20
7.3.1.	<i>Maintenance costs</i> .....	20
7.3.2.	<i>Network Control</i> .....	22
7.3.3.	<i>Corporate Overheads</i> .....	22
<b>8.</b>	<b>UNDERS &amp; OVERS ACCOUNTING</b> .....	<b>24</b>
8.1.	COMPLIANCE PERIOD UNDERS & OVERS BALANCE.....	24
8.2.	OPERATION OF THE UNDERS AND OVERS ACCOUNT.....	25
<b>9.</b>	<b>PRICING ZONE 3 - INDICATIVE ACCESS CHARGES</b> .....	<b>26</b>
<b>10.</b>	<b>SYSTEM WIDE TRUE UP TEST AUDIT</b> .....	<b>27</b>
<b>11.</b>	<b>CONTACT DETAILS (ARTC)</b> .....	<b>29</b>
	<b>APPENDIX A - HVAU SCHEDULE E</b> .....	<b>30</b>
	<b>APPENDIX B - 1 JANUARY TO 31 DECEMBER 2013 CAPITAL EXPENDITURE INCLUDED IN THE RAB/RAB FLOOR LIMIT</b> .....	<b>31</b>
	<b>APPENDIX C - 1 JANUARY TO 31 DECEMBER 2013 DISPOSALS</b> .....	<b>32</b>
	<b>APPENDIX D - 1 JANUARY TO 31 DECEMBER 2013 RAB FLOOR LIMIT ROLL FORWARD SUMMARY</b> .....	<b>33</b>
	<b>APPENDIX E - 1 JANUARY TO 31 DECEMBER 2013 RAB FLOOR LIMIT VALUES BY SEGMENT &amp; RAB VALUES BY SEGMENT</b> .....	<b>34</b>
	<b>APPENDIX F - INTEREST DURING CONSTRUCTION - 1 JANUARY TO 31 DECEMBER 2013</b> .....	<b>35</b>
	<b>APPENDIX G - STAKEHOLDER LISTING</b> .....	<b>36</b>

# 1. Introduction & Background

Terms used in this submission are as per the Hunter Valley Coal Network Access Undertaking as varied on 17 October 2012 (“HVAU”) unless otherwise obvious from the context.

## 1.1. Hunter Valley Coal Network Access Undertaking requirements

In accordance with the HVAU, ARTC must submit to the Australian Competition and Consumer Commission (“ACCC”) each calendar year<sup>1</sup>:

- documentation detailing roll-forward of the RAB (with respect to Pricing Zone 3) and the RAB Floor Limit, and comparisons between RAB and RAB Floor Limit with respect to Pricing Zone 3;
- documentation detailing calculations relevant to reconciliation of Access revenue with the applicable Ceiling Limit and any allocation of the total unders and overs amount including in Pricing Zone 3, where RAB is at or below RAB Floor Limit; and
- a copy of the Final Audit Report.

Documentation requirements are set out in detail at Schedule G of the HVAU.

The purpose of this submission is to demonstrate ARTC’s compliance with the requirements of Section 4.10 of the HVAU for the period 1 January 2013 to 31 December 2013 (“Compliance Period”). This submission is intended by ARTC to meet the information requirements detailed in clause 2 of Schedule G of the HVAU (provided as Attachment 1).

Under Section 4.10 of the HVAU, the ACCC is required to determine whether ARTC has undertaken:

- roll-forward of the RAB and RAB Floor Limit in accordance with the HVAU and, where the roll forward is not in accordance with the HVAU, determine what closing RAB or RAB Floor Limit would be in accordance with the HVAU;
- when required, the calculations relevant to reconciliation of Access revenue with the applicable Ceiling Limit and calculation of any allocation of the total unders and overs amount in accordance with the HVAU, and where the calculations are not in accordance with the HVAU, determine what total unders and overs amount or allocation would be in accordance with the HVAU having regard to the operation of its unders and overs account;

In determining whether ARTC has undertaken roll-forward of the RAB and RAB Floor Limit in accordance with the HVAU, the ACCC may have regard to the submissions of relevant industry participants but if Capital Expenditure has been endorsed by the

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<sup>1</sup> Section 4.10 of the 2011 HVAU

RCG in accordance with Section 9 of the HVAU, the ACCC will not consider whether that Capital Expenditure is Prudent.

The ACCC will publish its findings on its website and/or circulate to Access Holders in relation to the matters for its determination.

ARTC will revise the closing RAB and manage Constrained Coal Customer Accounts in accordance with any determination by the ACCC.

The ACCC will determine whether ARTC has incurred Efficient costs and Efficient operating expenditure in accordance with Section 4.5(b) of the HVAU, and determine the change (if any) to the total unders and overs amount or allocation and the closing RAB that results from Economic Cost only including Efficient costs and Efficient operating expenditure.

The ACCC will review the Final Audit Report and will decide, and will notify ARTC of, any amounts of underpayment of rebates that are owing to Access Holders or amounts of overpayment of rebates ARTC is entitled to recover.

## **1.2. Form of this submission**

In order to ensure compliance with the information requirements set out at Schedule G of the HVAU, ARTC has sought to prepare this submission broadly in line with the prescribed order at clause 2 of Schedule G. Table 1 below sets out the sections in this submission together with the relevant information requirement under Schedule G of the HVAU.

Section	Title	Relevant requirement at clause 2 of Schedule G of the HVAU
1	<b>Introduction</b>	
2	<b>RAB Roll Forward</b> <ul style="list-style-type: none"> <li>• Component calculation</li> <li>• Component values</li> <li>• Outcome and closing values</li> <li>• Spreadsheet model (confidential)</li> </ul>	2(b)(i) 2(b)(ii) 2(b)(iii) 2(b)(v)
3	<b>RAB Floor Limit Roll Forward</b> <ul style="list-style-type: none"> <li>• Component calculation</li> <li>• Component values</li> <li>• Outcome and closing values</li> <li>• Spreadsheet model (confidential)</li> <li>• Pricing Zone 3 RAB/RAB Floor Limit comparison</li> </ul>	2(b)(i) 2(b)(ii) 2(b)(iii) 2(b)(v) As required under Section 4.10 (a) of the HVAU
4	<b>Capital Expenditure</b> <ul style="list-style-type: none"> <li>• RCG endorsement</li> </ul>	2(b)(iv)
5	<b>Disposals</b> <ul style="list-style-type: none"> <li>• RCG endorsement</li> <li>• References</li> <li>• Determining current value</li> </ul>	2(b)(v) 2(b)(v) 2(b)(v)
6	<b>Contact Details (stakeholders)</b> <ul style="list-style-type: none"> <li>• Industry stakeholders</li> </ul>	2(b)(vii)
7	<b>Ceiling Test</b> <ul style="list-style-type: none"> <li>• Access revenue</li> <li>• Full Economic Cost by item</li> <li>• Total unders &amp; overs amount</li> <li>• H2 2011 comparison</li> <li>• Assumptions &amp; methodology</li> <li>• Spreadsheet model (confidential)</li> <li>• Access Holder endorsement</li> </ul>	2(c)(i)(A) 2(c)(i)(B) 2(c)(i)(C) 2(c)(i)(D) 2(c)(ii) 2(c)(iii) 2(c)(iv)
8	<b>Unders &amp; Overs Allocation</b> <ul style="list-style-type: none"> <li>• Assumptions &amp; methodology</li> <li>• Unders &amp; overs allocation (confidential)</li> <li>• Spreadsheet model (confidential)</li> </ul>	2(c)(ii) 2(c)(i)(C) 2(c)(iii)
9	<b>Pricing Zone 3 Interim Indicative Access Charge</b> <ul style="list-style-type: none"> <li>• 2012 Interim Indicative Access Charge</li> <li>• 2012 Initial Indicative Access Charge</li> </ul>	2(d) 2(d)
10	<b>System wide true up test audit</b> <ul style="list-style-type: none"> <li>• Final Audit Report</li> </ul>	2(e)
11	<b>Contact Details (ARTC)</b> ARTC authorised person	2(f)

Table 1: Submission Layout

## 2. RAB Roll Forward

### 2.1. Component Calculation

#### Initial RAB

The initial valuation of the Hunter Valley Coal Network was carried out by IPART in 2001. In December 2001, based on IPART's report, the Minister of Transport advised the infrastructure manager at the time, Rail Infrastructure Corporation (RIC), of the opening asset values to be used effective from 1 July 1999<sup>2</sup>. As part of annual compliance reviews conducted by IPART in accordance with the NSWRAU between 2000 and 2004, the 1999 opening values were rolled forward to determine the closing values for 2003-04, ahead of ARTC's commencement of its lease of the Hunter Valley Coal Network in 2004-05.

Since that time, asset values have been rolled forward as part of subsequent annual compliance assessments conducted by IPART in accordance with the NSWRAU to ultimately determine closing asset values as at 30 June 2011 as described earlier in this submission.

Upon commencement of the HVAU, Section 4.4(a)(i) provides for applicable parts of the regulatory asset base to be ascribed a regulatory asset value in accordance with the NSW Rail Access Undertaking in force at the time immediately preceding the commencement date. These values have been set in accordance with the NSW Rail Access Undertaking as at the commencement date of the HVAU (1 July 2011). For those assets not ascribed a value for regulatory purposes under the NSWRAU, a valuation determined using the depreciated optimised replacement cost (DORC) methodology has been approved by the ACCC.

#### RAB Roll Forward Calculation

For Segments forming part of Pricing Zone 3 in Schedule E of the HVAU, RAB will be rolled forward annually according to the following methodology:

$$RAB_t \text{ start} = RAB_{t-1} \text{ end} =$$

$$(1 + RoR) \times RAB_{t-1} \text{ start} - \text{Out-turn Revenue}_{t-1} + \text{Out-turn Opex}_{t-1} + \text{Net Capex}_{t-1} \times (1 + 0.5 \times RoR)$$

where:

**RAB<sub>t</sub> start:** RAB at the start of the relevant calendar year (t) (which, for the first year following the Commencement Date, would be the Initial RAB).

**RAB<sub>t-1</sub> end:** the RAB at the end of the preceding calendar year (t-1).

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<sup>2</sup> [http://www.railcorp.info/\\_data/assets/file/0015/672/Correspondence\\_from\\_Minister\\_to\\_RAC.pdf](http://www.railcorp.info/_data/assets/file/0015/672/Correspondence_from_Minister_to_RAC.pdf)

RAB <sub>t-1</sub> start:	the RAB at the start of the preceding calendar year (t-1).
RoR:	the nominal pre tax Rate of Return.
Out-turn Revenue <sub>t-1</sub> :	the total Access revenue earned by ARTC in the preceding calendar year (t-1) but will not include: <ul style="list-style-type: none"> <li>(i) a Capital Contribution received from an Applicant or an Access Holder; or</li> <li>(ii) Access revenue returned to a Contributor as a result of the operation of a user funding agreement between the Contributor and ARTC.</li> </ul>
Out-turn Opex <sub>t-1</sub> :	the total operating expenditure incurred by ARTC in the preceding calendar year (t-1), on an Efficient basis, determined in accordance with sections 4.5(a)(i), (iv) and (vii) and 4.5(b).
Net Capex <sub>t-1</sub> :	the net additions to the RAB in the preceding calendar year (t-1), that is out-turn Capital Expenditure by ARTC less the written down value of any disposals during the preceding calendar year (t-1) on a Prudent basis, including interest costs incurred during construction up until 1 July in the calendar year the asset was commissioned, capitalised in the year the asset was commissioned and determined by reference to the relevant form of the Rate of Return (to the extent that Capital Expenditure is incurred on a Prudent basis, including interest costs), but will not include Capital Contributions.

## 2.2. Component Values

### 2.2.1. RAB Start (RAB<sub>t-1</sub> start)

The RAB start is equal to the closing value of the relevant 2012 values as determined through separate roll forward of asset values approved by the ACCC.

ACCC has made a determination in relation to ARTC's compliance with the asset valuation roll forward principles under the HVAU and has determined the closing asset values for assets ascribed a regulatory asset value under the HVAU as at 31 December 2012 as shown in Table 2:

Pricing Zone 3 RAB Value	31-Dec-12
Pricing Zone 3 RAB Value	\$286,018,488

Table 2: Relevant asset values for assets ascribed a regulatory asset value under the HVAU (\$ nominal)

## 2.2.2. Rate of Return (RoR)

In accordance with Section 4.4(a) of the HVAU, a nominal pre-tax rate of return is applied to the RAB. As prescribed in clause 4.8, this rate is 11.83%.

New assets commissioned during the Compliance Period have a deemed commissioning date of 1 July 2013, as contemplated under the HVAU. The rate of return for these assets has been applied at 50% of 11.83%.

Return determined in Pricing Zone 3 for the RAB is \$34,601,733. This consists of the return earned on existing assets [RoR x RAB<sub>t-1</sub> start], \$33,835,987 with a further \$765,746 on assets commissioned during the Compliance Period [Net Capex<sub>t-1</sub> x (1 + 0.5 x RoR)].

## 2.2.3. Revenue [Out-turn Revenue<sub>t-1</sub>]

For the Compliance Period the Out-turn revenue in Pricing Zone 3 is \$62,588,568.

## 2.2.4. Operating Expenditure [Out-turn Opex<sub>t-1</sub>]

Operating expenditure in Pricing Zone 3 for the Compliance Period is \$17,277,336. This expenditure is made up of the following:

• Variable Track Maintenance	\$	4,939,967
• Fixed Track Maintenance	\$	7,920,060
• Asset Management Overheads	\$	1,401,442
• Network Control	\$	1,667,840
• Corporate Overheads	\$	1,348,027

## 2.2.5. Net Capital Expenditure [Net Capex<sub>t-1</sub>]

Net Capital expenditure in Pricing Zone 3 for the Compliance Period amounts to \$12,945,831.

Major capital expenditure of \$4,463,057 was attributed to the RAB with an additional \$10,204,894 in Minor Capital also added to the RAB during the Compliance Period.

No Interest during construction has been determined for the major capital expenditure in 2013 as all the expenditure was post-commissioning spend.

Disposals for the Compliance Period amount to \$1,722,119.

Refer to Section 4 for details of Major and Minor Capital commissioned during the Compliance Period.



## 2.3. Outcome and Closing Values

Applying the roll forward formula as ascribed at Section 4.4(a) of the HVAU and the relevant values for the Compliance Period, the closing values for the RAB in Pricing Zone 3 (unconstrained network) can be determined.

The results are summarised in Table 3 below.

Value		Unconstrained	Constrained
<b>Opening RAB</b>	<i>RAB t-1 start</i>	\$ 286,018,488	-
Return On Opening RAB	<i>RoR x RABt-1 start</i>	\$ 33,835,987	-
Less Revenue	<i>Out-turn Revenue t-1</i>	-\$ 62,588,568	-
Plus Opex	<i>Out-turn Opex t-1</i>	\$ 17,277,336	-
Plus Net Capex	<i>Net Capex t-1</i>	\$ 12,945,831	-
Plus Return On Capex	<i>Net Capex t-1 x (1 + 0.5 x RoR)</i>	\$ 765,746	-
<b>Closing RAB</b>	<i>RAB t-1 end</i>	\$ 288,254,821	-

Table 3: Pricing Zone 3 RAB roll forward

Appendix E presents the opening, average and closing RAB values for each Segment in Pricing Zone 3.

An electronic copy of the spreadsheet underpinning the calculations for the roll forward of the RAB in Pricing Zone 3 is provided to ACCC on a confidential basis as part of this submission.

It is ARTC's view that the roll forward of the RAB has been calculated in accordance with Section 4.4(a) of the HVAU.

### 3. RAB Floor Limit Roll Forward

#### 3.1. Component Calculation

In accordance with Section 4.4(b) of the HVAU, the RAB Floor Limit for a Segment or group of Segments will be:

- (i) as at the Commencement Date, the Initial RAB;
- (ii) rolled forward annually according to the following methodology

$$\text{RAB Floor Limit}_t \text{ start} = \text{RAB Floor Limit}_{t-1} \text{ end} = (1 + \text{CPI}_{t-1}) \times \text{RAB Floor Limit}_{t-1} \text{ start} + \text{Net Capex}_{t-1} - \text{Depreciation}_{t-1}$$

where:

**RAB Floor Limit<sub>t</sub> start:** the RAB Floor Limit at the start of the relevant calendar year (t) (which, for the first year following the Commencement Date, would be the Initial RAB).

**RAB Floor Limit<sub>t-1</sub> end:** the RAB Floor Limit at the end of the preceding calendar year (t-1).

**RAB Floor Limit<sub>t-1</sub> start:** the RAB Floor Limit at the start of the preceding calendar year (t-1).

**CPI<sub>t-1</sub>:** the inflation rate for the preceding calendar year (t-1), determined by reference to the CPI for the September quarter of that year.

**Net Capex<sub>t-1</sub>:** the net additions to the RAB Floor Limit in the preceding calendar year (t-1) that is out-turn Capital Expenditure by ARTC less the written down value of any disposals during the preceding calendar year (t-1) on a Prudent basis, including interest cost incurred during construction up until 1 July in the calendar year the asset was commissioned, capitalised in the year the asset was commissioned and determined by reference to the relevant form of the Rate of Return (to the extent that Capital Expenditure is incurred on a Prudent basis, including interest cost), but will not include Capital Contributions.

**Depreciation<sub>t-1</sub>:** Depreciation applicable to the RAB Floor Limit in the preceding calendar year (t-1).

## 3.2. Component Values

### 3.2.1. RAB Floor Limit Opening Value [RAB Floor Limit<sub>t-1</sub> start]

As prescribed at clause 4.4 (a) of HVAU RAB Floor Opening Value is equal to the closing RAB Floor Limit approved by the ACCC for the compliance period ending 31 December 2012.

### 3.2.2. Consumer Price Index [CPI<sub>t-1</sub>]

In accordance with clause 4.4(b) of the HVAU, CPI has been calculated to be 2.055%. The rate has been determined based on the variation in CPI from September 2012 (All Sydney) of 102.2 and September 2013 (All Sydney) of 104.3.

For the Compliance Period CPI has been applied to the RAB Floor Limit Opening Value increasing the RAB Floor Limit by \$31,876,866.

### 3.2.3. Net Capital Expenditure [Net Capex<sub>t-1</sub>]

Major and minor capital additions for the Compliance Period have added a net value (including interest during construction and loss on disposals) of \$155,187,320 to the RAB Floor Limit.

Major capital additions totalling \$132,319,826 (including interest during construction of \$5,421,587 as per Table 4 below) and minor capital of \$29,039,480 have been included.

Assets disposed of during the Compliance Period were commissioned prior to 1 July 2011 and have been included in the roll forward of Existing Assets. Disposals amount to \$6,171,987. Appendix C provides a listing of disposals. Further detail in relation to the determination of the disposals amount is provided in Section 5 of this submission.

Capital additions commissioned during the Compliance Period are 'deemed' to have been commissioned at the mid-point of the Compliance Period (1 July 2013) for the purposes of determining Depreciation. Financing costs and return are also determined on a consistent basis.

Project Name	Interest During Construction
Drayton Junction Upgrade	\$2,107,504
KCT Bypass Road Realignment	\$84,715
Bylong Loop Extension	\$3,229,368
<b>Total IDC 2013</b>	<b>\$5,421,587</b>

Table 4: Interest During Construction 2013

Refer to Section 4 of this document for supporting data and Appendix B for a list of the Major and Minor Capital additions by Segment at an aggregated

activity level and confidential Attachment 2 to Attachment 2 for Minor Capital additions at a detailed job level.

### 3.2.4. Depreciation [ $Depreciation_{t-1}$ ]

Section 4.7 of the HVAU provides that depreciation is calculated each year using a straight line methodology with respect to the remaining useful life of the assets. The remaining useful life approved as part of the HVAU has been determined to be the average remaining mine life of 22 years as at 2010 (taken to be at the midpoint of 2010).

Depreciation is charged on the inflation adjusted RAB Floor Limit Opening Value and Net Capital Expenditure incurred during the Compliance Period.

For assets existing as at 1 January 2013, Depreciation will be determined for the Compliance Period, with CPI applied as per HVAU. The applicable remaining useful life for these assets as at 1 January 2013 is 19.5 years.

Assets commissioned during the Compliance Period are 'deemed' to have been commissioned at the mid-point of the Compliance Period (1 July 2013) for the purposes of determining Depreciation. The applicable remaining useful life for these assets as at 1 July 2013 is 19 years.

Assets included in the Opening RAB Floor Limit value have been depreciated using the straight line methodology, as described above, by applying the remaining life applicable at time of commissioning or upon commencement of the HVAU, as appropriate.

Total depreciation charged is \$85,153,141 split between \$80,906,843 for existing assets and \$4,246,298 for assets commissioned during the Compliance Period.

### 3.3. Outcome and Closing Values

Applying the roll forward formula and the relevant values for the Compliance Period, the closing value for the RAB Floor Limit can be determined for the Network and for the Constrained Network.

The results are summarised for the Network in Table 5 below.

Values		Value	Network
Opening Value	$RAB\ Floor\ Limit_{t-1}\ start$		\$ 1,551,340,789
CPI	$CPI_{t-1}$	2.055%	\$ 31,876,866
Cap Ex	$Net\ Capex_{t-1}$		\$ 155,187,320
Depreciation	$Depreciation_{t-1}$		-\$ 85,153,141
Closing Value			\$ 1,653,251,834

Table 5: RAB Floor Limit roll forward

Appendix E presents the opening, average and closing RAB Floor Limit values for each Segment of the Network for the Compliance Period, clearly specifying which Segments form the Constrained Network.

An electronic copy of the spreadsheet underpinning the calculations for the roll forward of the RAB Floor Limit is provided to ACCC on a confidential basis as part of this submission. A summary of the RAB Floor Limit roll forward is shown in Appendix D.

It is ARTC's view that the roll forward of the RAB Floor Limit has been calculated in accordance with the Section 4.4(b) of the HVAU.

### 3.4.Pricing Zone 3 RAB and RAB Floor Limit Comparison

Values		PZ 3	
<b>Opening Value</b>	<i>RAB Floor Limit</i> $t-1$ <i>start</i>		\$ 275,579,819
CPI	<i>CPI</i> $t-1$	2.055%	\$ 5,662,599
Cap Ex	<i>Net Capex</i> $t-1$		\$ 12,945,831
Depreciation	<i>Depreciation</i> $t-1$		-\$ 14,734,933
<b>Closing Value</b>			\$ 279,453,315

Table 6: Pricing Zone 3 RAB Floor Limit 2013

Table 3 (in Section 2.3) shows a closing RAB value for Pricing Zone 3 assets for the Compliance Period of \$288,254,821. Table 6 above shows a closing RAB Floor Limit value for Pricing Zone 3 assets for the Compliance Period of \$279,453,315.

This demonstrates that for Pricing Zone 3, RAB is higher than RAB Floor Limit. This confirms that Pricing Zone 3 is an unconstrained part of the Network. In accordance with Section 4.10(a)(ii) of the HVAU, ARTC is not required to detail calculations relevant to reconciliation of Access revenue with the applicable Ceiling Limit and calculations of any allocation of the total unders and overs amount.

## 4. Capital Expenditure

Sections 7 to 11 of the HVAU set out compliance activities with regard to initiation of, industry consultation on, and funding of Capital Expenditure in relation to the Network. Specifically, these sections provide a framework for industry endorsement of Capital Expenditure through the Rail Capacity Group (RCG) for inclusion in the RAB. The Capital Consultation Document (Attachment 2) describes ARTC's relevant compliance activities, and industry endorsement, with regard to the Compliance Period.

Under section 9.2 of the HVAU ARTC is obliged to convene and conduct regular monthly meetings of the RCG. The RCG is a regular industry forum to ensure Access Holders, prospective Access Holders and other industry stakeholders are provided relevant input to identify, prioritise and evaluate future network investments and refine the capital works programme.

During 2013, ARTC followed a number of existing consultation and endorsement practices that had been applied historically under the NSWRAU which had been successful and were considered to be consistent with the above objectives. Such a practice included the process for development, endorsement and delivery of the minor capital programme, where the programme was presented for endorsement, indicative works and costings within that programme were provided, the programme was endorsed, and the works delivered.

It was generally accepted that the detail of the programme related to planned works and cost estimates and that at the detailed level the nature of the works could change in terms of scope, priority and timing depending on prevailing circumstances such as identified network conditions and access to the network.

This existing practice was intended to be explicitly provided for in the RCG process at Section 9(e)(ii) of the HVAU.

Consistent with this, ARTC has sought RCG endorsement for the minor capital programme in its entirety rather than as individual works, and has provided an indicative scope of works as planned and cost estimates for these.

Due to this history, ARTC continued a consultation and endorsement approach for the minor capital program consistent with the above in 2013 under the HVAU, on the understanding that the intent of the wording in the HVAU, and the approach itself was acceptable to industry stakeholders, the RCG and the ACCC.

Following the 2012 Annual Compliance submission, ARTC recognised that the ACCC is seeking greater clarity around the consultation and endorsement of minor capital expenditure. It is ARTC's understanding that the ACCC is seeking increased evidence of RCG consultation in relation to the minor capital programme and variations to it as described earlier in order to determine whether minor capital expenditure has been incurred on a Prudent basis.

ARTC had proposed that in the future RCG be kept informed of the progress of the endorsed minor capital program where material variations are identified. That is,

projects showing a forecast variance to cost to complete of +/- \$50,000 of the amount endorsed or have encountered material change to timely delivery. It is intended that updates regarding delivery of the minor capital program will routinely be provided on a six monthly basis.

ARTC has initiated the process to amend the current RCG consultation and endorsement process accordingly. In the April 2014 RCG meeting, a report detailing variations in minor capital projects between January 2013 and June 2014 was tabled before the members. The RCG was appreciative of the update for variances within the minor capital programme and acknowledged the additional transparency this update provided. No queries were raised, nor did the RCG seek any further clarification or explanation of the variances within the programme. This report has been included in confidential Attachment 3.

ARTC will continue to present a similar report to the RCG every six months and it hopes this will assist in informing relevant stakeholders and the ACCC in coming to a view as to whether expenditure in relation to the minor capital works program has been incurred on a Prudent basis.

Capital Expenditure on new and existing assets to be included in the RAB and RAB Floor Limit for the Compliance Period is set out in Appendix B. This appendix details Major and Minor Capital expenditure during the Compliance Period by Segment at an aggregated activity level. Minor capital expenditure has been further expanded upon in confidential Attachment 2 to Attachment 2, at a detailed job level that the Capital Expenditure relates to.

Evidence of Access Seekers endorsement of Capital Expenditure as required under Schedule G of the HVAU is provided in confidential Attachment 3 (not for publication).

## 5. Disposals

Capital works resulted in asset disposals for the Compliance Period amounting to \$6,171,987. In relation to assets ascribed a regulatory asset value under the NSWRAU, ARTC has calculated:

- disposal values, based on the written down RAB values (with reference to the Booz Allen Hamilton DORC database determined under the NSWRAU in 2001); and
- ARTC's net loss on disposal, calculated as the written down RAB value less any recovery on disposal (either through an adjustment to inventory or recovery as scrap sales).

The 'net' loss on disposals is therefore included in the 'cost items' for this submission (as detailed in Table 7 of Section 7.1). Appendix C provides a summary of the disposals and net loss on disposals for the relevant assets.



## 6. Contact Details - Stakeholders

In accordance with Schedule G, Section 2(b)(vii) of the HVAU, a list of stakeholders has been confidentially provided for use by the ACCC at Appendix G.

The name, address and contact details (including email address) of stakeholders considered by ARTC to be relevant Applicants and Access Holders and other parties consulted regarding compliance matters. This is to include a contact at CEO/Executive level for the purpose of an ACCC letter and a regular operational contact for email notification.

Where a stakeholder identified by ARTC is not a relevant Applicant or Access Holder, ARTC will indicate their relationship with ARTC and/or their interest in ARTC's compliance, for instance: end user, industry advocate, etc.

## 7. Ceiling Test

### 7.1. Compliance Scope

The Ceiling Test Model (provided to ACCC as part of this submission on a confidential basis) is used to test Access revenue for a mine or a combination of mines against the applicable Ceiling Limit to determine the Constrained Network and Constrained Group of Mines as contemplated under the HVAU.

The Ceiling Test Model calculates the amount of Access Revenue and the Economic Cost across the Segments utilised by the mine or a combination of mines (Ceiling Limit). This allows for testing combinations of mines, including those combinations that could potentially fail the Ceiling Test (i.e. where Access revenue for that mine or combination of mines exceeds Economic Cost for the Segments used by that mine or combination of mines).

The combination of mines that is closest to, or exceeds the economic cost for the relevant Segments is called the Constrained Group of Mines and the Segments comprise the Constrained Network.

Table 7 below summarises the results of the Ceiling Test Model result for the Constrained Network. For the Compliance Period the Constrained Network is formed by the Segments utilised by the combination of mines between Ulan, Muswellbrook and the Newcastle coal terminals.

A comparison with revenue and costs associated with the constrained network as determined by ACCC in relation to 1 July to 31 December 2012 compliance period has been included. This is intended as a proxy, in the absence of better information, for information required under Schedule G, Section 2(c)(i)(D) of the HVAU.

		ARTC Total	ARTC Total
		December 2012	December 2013
<i>millions</i>		Actuals	Actuals
<b>GTKs</b>		<b>GTK</b>	<b>GTK</b>
	<i>Export</i>	22,256	24,126
	<i>Domestic</i>	1,456	1,707
	<b>Total</b>	<b>23,712</b>	<b>25,834</b>
<b>Revenue</b>			
	<b>Total Revenue</b>	<b>241.82</b>	<b>277.93</b>
<b>Operating Costs</b>			
<b>Infrastructure Costs</b>			
	<i>Variable</i>	27.15	28.79
	<i>Fixed</i>	23.82	29.06
	<i>Shared Maintenance</i>	18.27	15.93
	<b>Total Maintenance Costs</b>	<b>69.23</b>	<b>73.78</b>
	<i>Expensed Project Costs</i>	1.50	8.97
	<b>Total Infrastructure</b>	<b>70.73</b>	<b>82.75</b>
	<i>Network Control</i>	9.30	9.27
	<i>Corporate Overheads</i>	12.31	10.70
	<b>Total Operating Cost</b>	<b>92.34</b>	<b>102.72</b>
	Depreciation	54.57	70.19
	Net Loss on Disposal	1.74	4.45
	<b>Total Cost</b>	<b>148.65</b>	<b>177.36</b>
	<b>Profit/Loss</b>	<b>93.17</b>	<b>100.56</b>
	Total ROA	97.99	120.17
	<b>Full Economic Costs</b>	<b>246.64</b>	<b>297.53</b>
	<b>Revenue - Costs</b>	<b>-4.82</b>	<b>-19.60</b>
	<b>Average Asset Base</b>	<b>1076.80</b>	<b>1320.52</b>

Table 7: 2013 CY Ceiling Test

## 7.2. Access Revenue

Clause 4.3(a) of HVAU requires that the Access revenue from any Access Holders or group of Access Holders must not exceed the Economic Cost of those Segments, on a stand-alone basis, identified as forming part of Pricing Zone 1 and 2 in Schedule E (refer Appendix A). This is defined in the HVAU as the Ceiling Limit.

In relation to Pricing Zone 3, 4.3(b) requires that Access revenue from any Access Holder or group of Access Holders must not exceed the Ceiling Limit where the RAB for those Segments is equal to or falls below the RAB Floor Limit for those Segments at the end of the calendar year (t-1). For the Compliance Period, the RAB Floor Limit is below the RAB for the Segments comprising Pricing Zone 3.

From 1 February 2012 Access Holders transitioned to executed and operational Access Holder Agreements. During the Compliance Period Access revenue was collected from

both Access Holders and Rail Operators under existing Access Agreements, based on 2012 Interim Indicative Access Charges and other Charges as contemplated under the HVAU.

The total Access revenue received from each mine within the Hunter Valley Network were obtained from ARTC's billing systems.

Access revenue collected and used as the basis for determining allocations of the total unders and overs amount to Constrained Coal Customer Accounts for the Compliance Period amounts to \$277.93million.

Constrained Coal volume for the Compliance Period of 136.1mT (compared to that occurring in the 1 January to 31 December 2012 compliance period, 120.2mT) supports the increase in Access revenue reported in the Compliance Period. The increase in Access Revenue for the Constrained Group of Mines also reflects the increase in Economic Cost for the Constrained Network as shown in Table 7.

The GTKs reported are as expected and reflect the volumes transported from the Constrained Group of Mines for the Compliance Period. However, the percentage increase in GTKs is not aligned with the percentage increase in coal volumes. As coal volumes from individual mines vary compared to 2012, the GTK increase becomes a product of the distance of each mine from the port and the volume change for that mine. A change in the number paths utilised by Access Holders between 2012 and 2013 can be seen in the graph below.

*Graph deleted to maintain confidentiality of volumes.*

## **7.3. Full Economic Cost**

### **7.3.1. Maintenance costs**

Maintenance costs include major periodic maintenance ("MPM") and reactive corrective routine maintenance ("RCRM"). As with the previous submission to the ACCC actual MPM costs have been used. Both RCRM and MPM costs are reported for each Segment and split between fixed and variable based upon an engineering assessment of the extent to which the activity varies in proportion with volume.

Total variable costs for each Segment are divided by total GTK's (including non-coal and unconstrained GTKs) to derive a variable cost per GTK for each Segment.

All fixed maintenance costs for each Segment forming part of the Constrained Network is included in the Ceiling Limit in accordance with the HVAU.

By the nature of maintenance costs, it could be expected that variable maintenance expenditure would vary with volume changes, while fixed maintenance expenditure would depend more on movements in cyclic maintenance requirements which can vary independently of volume changes.

The overall cost of maintenance work performed by ARTC for the Compliance Period is largely in alignment with the costs incurred during 2012. However, it is significantly lower than the maintenance costs forecast for 2013 as advised to Access Holders in pricing advice provided in late 2012, in accordance with the requirements of the HVAU. The scope of maintenance tasks envisaged at the time of preparing the 2013 price setting advice to Access Holders was unable to be delivered and hence resulted in a reduced maintenance expenditure of \$18.4M or 24% compared to previous forecasts.

In that advice, a substantial increase in variable maintenance expenditure to that in 2012 was forecast to occur in 2013 largely due to a cyclic ballast cleaning program in Pricing Zones 1 and 2 commencing in 2012 (extending through to 2014). However, a bulk of this program has been moved from 2013 and is scheduled to occur in 2014. This was primarily due to the unavailability of track possession and track resources. This maintenance was deferred as a result and is scheduled to be completed during the 2014 calendar year.

Of the \$18.4M, actual variable maintenance expenditure accounts for \$12.6M and was 28% lower than forecast in the advice. Excluding project cost expensed and incidents costs, fixed maintenance expenditure was \$5.8M or 18% lower than forecast also reflecting the advised forecast rescheduling of cyclic maintenance activity on the Network.

An unexpected cost in fixed maintenance of \$8.97M arose through the expensing of projects associated with the PWCS Terminal 4 (T4) expansion. A suite of projects were endorsed by the RCG prior to 2013 to enable the rail track capacity to match the additional capacity provided by T4. For each project, RCG endorsement is required to proceed to the next stage. For the T4 projects, the RCG did not endorse project advancement due to the deferral of the T4 project by PWCS and the capital spent was sought to be expensed in 2013.

The expensed projects and the associated costs were discussed with the access holders during quarterly access holder meetings in November 2013 and February 2014. In addition, a consolidated list of expensed projects was provided to the RCG in March 2014 to add further transparency. This information paper did not seek endorsement but provided advice that in accordance with the previously endorsed project phases, projects were being expensed. No objections were raised by the RCG to the expensing of these projects in 2013.

A total of \$1.5M has been included in the fixed maintenance costs arising from various Incidents on the Constrained Network. Incidents include and are not limited to lightning strikes, wheel burns, derailment related track and structure damage and damage caused by flooding.

Shared Maintenance has seen a \$2.34M or a 13% decrease from 2012. The primary reason for this decrease was the decision to directly identify provisioning centre costs with the relevant pricing zones rather than them being identified at a higher corridor level and allocated to pricing zones on a

GTK basis as done historically. The aggregation of sections of the Country Regional Network into the ARTC network instigated a review of the provisioning centre costs related to the Country Regional Network. The review recommended direct identification of such costs to pricing zones as being more equitable and appropriate than allocation on a GTK basis. Section 4.6 of the HVAU requires Non-Segment Specific Cost to be identified with specific parts of the network, where possible, rather than to be allocated on some basis. ARTC has sought to consistent with the HVAU in this regard.

### **7.3.2. Network Control**

Network control includes labour and materials associated with the delivery of the following functions:

- train control and signalling
- train planning and programming
- operations and customer management
- train communication costs

Network control costs are apportioned to the Hunter Valley on the basis of area of coverage of the train control and signalling function required to operate that section of the network and where this is not relevant, on a train kilometre basis in accordance with Section 4.6 of the HVAU.

Network control also includes the terminal management costs associated with the delivery of:

- yard control
- signalling
- incident management

Network control costs for the Compliance Period of \$9.27M are approximately the same as the network control costs approved by ACCC for 2012

### **7.3.3. Corporate Overheads**

Corporate overheads include labour and materials associated with the following functions:

- human resources
- property
- legal
- information technology
- finance
- procurement
- risk and safety
- CEO office

Corporate overheads are allocated to the Hunter Valley Network by train km, in accordance with Section 4.6 of the HVAU.

Corporate overhead costs are \$1.6M less than the 2012 Compliance Period. This reflects the increased share of Interstate non-coal train kms of total ARTC network train kms when compared with the Constrained Coal train kms resulting in a reduction in costs allocated to the Constrained Network. In addition, a restructure within ARTC saw the Technical Services division being absorbed by other business divisions and so relevant associated Technical Services cost could be directly identified with specific corridors rather than being allocated as a system wide cost and allocated to the Hunter Valley corridor on a Train Km basis. ARTC has sought to consistent with section 4.6 of the HVAU in this regard.

## 8. Unders & Overs Accounting

### 8.1. Compliance Period Unders & Overs Balance

Total Access revenue earned by ARTC from the Constrained Group of Mines was compared to the Economic Cost of the Constrained Network, including the operating costs described in section 7 of this submission, Depreciation, net loss on disposal and the real Return of 9.10% based on the average RAB Floor Limit for the Compliance Period, as detailed in Section 2.

The difference between Access revenue for the Constrained Group of Mines and Economic Cost of the Constrained Network (Ceiling Limit) results in a total unders and overs amount for the Compliance Period as contemplated at section 4.9 of the HVAU, as shown in Table 8 below.

	ARTC TOTAL	
	December 2012	December 2013
	Actuals	Actuals
<i>millions</i>		
<b>ARTC Unders/Overs</b>		
<i>Opening Value</i>	0.73	-4.82
<i>Refunds/Payments</i>	-0.73	4.82
<i>Yearly adjustment</i>	-4.82	-19.60
<i>Closing Value</i>	<b>-4.82</b>	<b>-19.60</b>

Table 8: Unders & Overs

The unders and overs amount for the 1 January to 31 December 2012 compliance period reflects the ACCC's determination with respect to its assessment in 2013 in accordance with the HVAU. It is ARTC's intention to bring this amount to zero as at 30 April 2014, by invoicing the relevant access holders.

ARTC's 2013 Initial Indicative Access Charges and other Charges that applied during the Compliance Period were based on a forecast volume of 134M nett tonnes for constrained export coal and 7.3M nett tonnes for constrained domestic coal for the 2013 calendar year. These forecasts were obtained directly from coal producers and adjusted by ARTC to align to coal chain capacity declared by the Hunter Valley Coal Chain Coordinator (HVCCC) for that period. During the Compliance Period, actual constrained export volumes (128.8M nett tonnes) were below the forecast. This along with a high number of expensed projects (as endorsed by the RCG during the course of the Compliance Period) are the principal reasons for the under recovery of revenue for the Compliance Period

It is ARTC's view that the Ceiling Test and determination of the Unders and Overs amount has been carried out on an Efficient cost basis, and in accordance with Section 4 of the HVAU.

A separate confidential analysis of unit costs will be provided to the ACCC in support of this submission.



## **8.2. Operation of the Unders and Overs Account**

As indicated in section 8.1 of this submission, ARTC is in the process of reconciling the 1 January to 31 December 2013 total unders and overs amount and unders and overs account balances with relevant Access Seekers in accordance with the HVAU.

As part of this submission ARTC has provided the allocation spreadsheet to the ACCC on a confidential basis that determines allocations of the total unders and overs amount for the Compliance Period to Constrained Coal Customers in accordance with the requirements set out in clause 4.9(b)(iii).

## 9. Pricing Zone 3 - Indicative Access Charges

In accordance with Schedule G, Section 2(d), and as RAB for Pricing Zone 3 is greater than the RAB Floor Limit for Pricing Zone 3, ARTC is required to provide Indicative Access Charges for Pricing Zone 3 applicable during the Compliance Period, and for the previous calendar year. This requirement arose in order to enable the ACCC to determine compliance with a section of an earlier version of the HVAU (Section 4.2(d) of a version submitted to the ACCC on 7 September 2010). This section was not retained in the HVAU and, as such the provision of information under Section 2(d) of Schedule G of the HVAU, is no longer relevant to this compliance review.

Nevertheless, ARTC has provided in Table 9 below, 2013 Initial Indicative Access Charges for Pricing Zone 3, applicable during the Compliance Period, and 2012 Initial Indicative Access Charges applicable in December 2012 for Pricing Zone 3 at Table 10 below.

Pricing Zone 3 - 2013			
	Non-TOP \$/kgtkm	TOP \$/kgtkm	
Initial Indicative Service 1	0.710	6.677	25 tonne maximum axle load
			80kph maximum speed (loaded)
			80kph maximum speed (empty)
			82 wagon train length
			section run times as per applicable Hunter Valley standard working timetable

Table 9: 2013 Pricing Zone 3 Initial Indicative Access Charges

Pricing Zone 3 - 2012			
	Non-TOP \$/kgtkm	TOP \$/kgtkm	
Interim Indicative Service 1	0.837	5.564	25 tonne maximum axle load
			80kph maximum speed (loaded)
			80kph maximum speed (empty)
			82 wagon train length
			section run times as per applicable Hunter Valley standard working timetable

Table 10: 2012 Pricing Zone 3 Initial Indicative Access Charges

## 10. System Wide True Up Test Audit

In accordance with clause 4.10(f) ARTC has engaged BDO (SA) Pty. Ltd. (BDO) as auditor for the Annual True Up Test Audit to be conducted under Section 4.10(f) of the 2010 HVAU. BDO has prepared the Audit Report and their findings are noted below.

A True Up Test was conducted for each month and quarter (as applicable) during the Compliance Period.

A copy of the Audit Report has been provided at Attachment 4 to this submission.

The Audit Report concludes that ARTC is not liable for any rebates under the True Up Test for 2013 due to a System Availability Shortfall. The report includes details of immaterial issues that ARTC has sought to address as noted below. Other than as specifically reported during 2013, ARTC is not proposing to re-publish updated results of the True Up Test to account for any issues that have been deemed immaterial.

<b>BDO audit findings</b>	<b>ARTC management response</b>
Domestic cancellation data was inadvertently omitted from the 'Cancellation to System Losses' model resulting in a number of small variances to Actual System Losses and Actual Other Party Losses for Pricing Zone 2 throughout the year. These variances are summarised in Appendix 1, table 1.	A formula omitted from domestic calculations resulted in a failure to account for domestic actual system and other party losses. ARTC has implemented a change to the cancellation modelling to eliminate the potential for this to occur again in the future.
The process of allocating the annualised sculpted path usages between months is performed differently for domestic and export Access Holders. As part of this process, the allocation of paths for one of the export Access Holders was allocated on the basis of a domestic Access Holder, while a domestic Access Holder's paths were allocated on an export basis. While this didn't impact the overall base path usages, it had a minor impact on the individual monthly base path usages (BPUs) as summarised in Appendix 1, table 2.	A formula error in ARTC modelling resulted in some domestic paths being reported as export and vice versa. ARTC has rectified this for 2014 and will update procedures to ensure the allocation between domestic and export paths is segregated correctly.
The individual access holder's tolerance limit for one of the monthly Access Holders was understated by 2 paths from April to June and 3 paths from July to December. This limit only impacts outputs once a user has been granted tolerance paths up to their limit. A review of the Access Holders usage statistics revealed there is only one month (April) where this exception has affected the usage inputs included in the TUT, overstating ad-hoc paths by 2 (increasing total path usages required (TPR)). As there was a system availability surplus there was no effect on the result of the relevant TUT.	This formula error in ARTC modelling resulted in PZ3 tolerance paths being understated This error has since been corrected in ARTC modelling. ARTC will update procedures to ensure the calculations for tolerance in all pricing zones is reflected correctly.
ARTC's method to calculate Network Path Capability (NPC) was much more extensive than is required under the AHAs. This appears to calculate a more accurate estimate of NPC data than simply using one point in each of the three pricing zones.	ARTC notes BDO's comment regarding accuracy of the calculation. ARTC has provided NPC numbers, as required, to access holders along with the method used to calculate the NPC at the commencement of each contract year.
An erroneous use of weightings within the NPC model resulted in a net understatement of the Network Path Capability each month and as a result an	A formula to calculate the weightings in pricing zone 1 was incorrect in 2013 resulting in the understatement of SAS. The weightings have since been corrected in

<p>understatement of the System Availability Surplus. These amounts have been summarised in Appendix 1, table 3.</p>	<p>the NPC model.</p>
<p>The calculation of actual maintenance requirement for April was overstated by 168 for pricing zone 1 and 52 for pricing zone 2, resulting in an understatement of the system availability surplus.</p>	<p>The percentages used in the April calculation were the YTD data rather than the monthly data as a result of a transcription error in the transfer of HVCCC data. This error has since been corrected in the NPC model.</p>
<p>Some inputs to the True-up test can alter subsequent to the time of publication due to changes in data from external sources. A number of small variances were identified between the published results and the final TUT which can be attributed to this fact. The net impact on the monthly System Availability Surplus is summarised in Appendix 1, tables 4 and 5. In each case, the published result agreed to the True-up test calculation at the time of publication.</p>	<p>Resculpting of one access holder's paths resulted in a retrospective change to the last 6 months of 2013. This was considered immaterial and therefore TUT results were not retrospectively republished.</p>

## 11. Contact Details (ARTC)

In relation to this compliance submission, in accordance with Schedule G, Section 2(f), further information in relation to this submission can be arranged through:

Glenn Edwards  
Manager Economic Regulation  
Telephone: 08 8217 4292  
Email: [gedwards@ARTC.com.au](mailto:gedwards@ARTC.com.au)

## APPENDIX A - HVAU Schedule E

### SCHEDULE E - Segments

Pricing Zone	Segment	Description	Length
3	0401	Dartbrook - Werris Creek	114.3
3	0402	Werris Creek - Gap	5.2
1	0915	Islington Jct – Scholey St Jct	0.7
1	0916	Scholey St Jct – Port Waratah	3.0
1	0917	Scholey St Jct – Waratah (Via Coal)	0.9
1	0925	Waratah – Hanbury Jct (Via Coal)	1.7
1	0926	Hanbury Jct – Sandgate (Via Coal)	2.9
1	0927	Hanbury Jct – Kooragang East Jct	2.4
1	0929	Kooragang East Jct - NCIG Jct	0.8
1	0930	NCIG Jct To Kooragang Island	5.9
1	0931	Kooragang East Jct To Sandgate	0.5
1	0936*	Sandgate To Thornton (Via Coal)	11.7
1	0937	Thornton To Maitland (Via Coal)	10.4
1	0944	Telarah To Farley	0.8
1	0946	Maitland To Farley	1.4
1	0947	Farley To Branxton	21.7
1	0948	Branxton To Whittingham	18.4
1	0951	Whittingham To Saxonvale Jct	8.3
1	0952	Saxonvale Jct To Mount Thorley	2.8
1	0955	Whittingham To Camberwell Jct	12.9
1	0956	Camberwell Jct To Glennies Creek	6.9
1	0957	Glennies Creek To Newdell Jct	8.4
1	0958	Newdell Jct To Draytons Jct	9.7
1	0959	Newdell Branch	2.7
1	0961	Draytons Jct To Muswellbrook	16.8
3	0962	Muswellbrook To Dartbrook Jct	7.8
1	0970	Muswellbrook To Bengalla Jct	5.4
2	0971	Bengalla Jct To Anvill Hill	12.8
2	0972	Anvill Hill to Sandy Hollow Junction	22.6
2	0973	Sandy Hollow Jct To Wilpinjong	95.1
2	0974	Wilpinjong To Ulan Colliery Jct	9.7

\* Includes Sandgate Flyover (for the purposes of **section 4** Pricing Principles only) which forms part of ARTC Sector 938 Sandgate – Maitland (via Main)

# APPENDIX B - 1 January to 31 December 2013 Capital Expenditure included in the RAB/RAB Floor Limit

Sector / Segment #	Line Segment	Activity	CAPEX Project Type	Capital Expenditure \$M	Constrained Network (Yes / No)
916	Scholey St Jct To Port Waratah	330- Wayside Detection Systems - New Install	Minor Capital Works	0.538	Yes
		816- Signal/Xing Lamp Upg	Minor Capital Works	0.026	Yes
		817- General Comms Equip	Minor Capital Works	-0.002	Yes
930	NCIG To Kooragang Island	8665 - No.3 Departure Road at KCT	Major Capital Works	30.783	Yes
		<i>Interest During Construction</i>	Major Capital Works	0.000	Yes
		8666 - KCT Bypass Road Realignment	Major Capital Works	1.429	Yes
		<i>Interest During Construction</i>	Major Capital Works	0.085	Yes
		178- Rerailing	Minor Capital Works	0.529	Yes
		330- Wayside Detection Systems - New Install	Minor Capital Works	0.191	Yes
		759- Point Machine Replacement	Minor Capital Works	0.046	Yes
772- Signalling System Upgrades	Minor Capital Works	0.005	Yes		
936	Sandgate To Thornton (Via Coal)	178- Rerailing	Minor Capital Works	0.959	Yes
		759- Point Machine Replacement	Minor Capital Works	0.044	Yes
		772- Signalling System Upgrades	Minor Capital Works	0.178	Yes
937	Thornton To Maitland (Via Coal)	178- Rerailing	Minor Capital Works	0.524	Yes
		186- Turnout Renewal	Minor Capital Works	1.440	Yes
		229- Track Strengthening / Upgrading	Minor Capital Works	0.813	Yes
946	Maitland To Farley	178- Rerailing	Minor Capital Works	0.000	Yes
		229- Track Strengthening / Upgrading	Minor Capital Works	1.742	Yes
947	Farley To Branxton	178- Rerailing	Minor Capital Works	1.087	Yes
		229- Track Strengthening / Upgrading	Minor Capital Works	0.000	Yes
		772- Signalling System Upgrades	Minor Capital Works	0.058	Yes
948	Branxton To Whittingham	178- Rerailing	Minor Capital Works	0.999	Yes
		254- Culvert Replacement or Modification	Minor Capital Works	0.274	Yes
		772- Signalling System Upgrades	Minor Capital Works	0.019	Yes
951	Whittingham To Saxonvale Jct	178- Rerailing	Minor Capital Works	0.000	Yes
		760- Track Circuit Replacement	Minor Capital Works	-0.079	Yes
955	Whittingham To Camberwell Jct	178- Rerailing	Minor Capital Works	0.670	Yes
		229- Track Strengthening / Upgrading	Minor Capital Works	0.453	Yes
956	Camberwell Jct To Glennies Creek	178- Rerailing	Minor Capital Works	0.521	Yes
		186- Turnout Renewal	Minor Capital Works	0.000	Yes
		229- Track Strengthening / Upgrading	Minor Capital Works	0.378	No
957	Glennies Creek To Newdell Jct	178- Rerailing	Minor Capital Works	0.552	Yes
958	Newdell Jct To Draytons Jct	6928 - Drayton Junction Upgrade (Capital)	Major Capital Works	19.931	Yes
		<i>Interest During Construction</i>	Major Capital Works	2.108	Yes
		178- Rerailing	Minor Capital Works	0.212	Yes
959	Newdell Branch	229- Track Strengthening / Upgrading	Minor Capital Works	-0.636	Yes
		253- Bridge Replacement or Modification	Minor Capital Works	0.003	Yes
		772- Signalling System Upgrades	Minor Capital Works	-0.047	Yes
961	Draytons Jct To Muswellbrook	178- Rerailing	Minor Capital Works	0.702	Yes
		772- Signalling System Upgrades	Minor Capital Works	0.035	Yes
970	Muswellbrook To Bengalla Jct	178- Rerailing	Minor Capital Works	0.297	Yes
		253- Bridge Replacement or Modification	Minor Capital Works	-0.004	Yes
971	Bengalla Jct To Anvill Hill	178- Rerailing	Minor Capital Works	0.302	Yes
972	Anvill Hill to Sandy Hollow Jct	178- Rerailing	Minor Capital Works	0.636	Yes
		262- Level Crossing Upgrade (Civil)	Minor Capital Works	0.425	Yes
		330- Wayside Detection Systems - New Install	Minor Capital Works	0.000	Yes
973	Sandy Hollow Jct To Wilpinjong	5757 - Bylong Loop Extension	Major Capital Works	25.636	Yes
		<i>Interest During Construction</i>	Major Capital Works	3.229	Yes
		178- Rerailing	Minor Capital Works	2.387	Yes
		229- Track Strengthening / Upgrading	Minor Capital Works	2.469	Yes
		772- Signalling System Upgrades	Minor Capital Works	0.090	Yes
962	Muswellbrook To Dartbrook Jct	254- Culvert Replacement or Modification	Minor Capital Works	0.000	No
963	Dartbrook Jct To Murulla	178- Rerailing	Minor Capital Works	0.113	No
		186- Turnout Renewal	Minor Capital Works	1.019	No
		223- Resleepering	Minor Capital Works	-0.272	No
		253- Bridge Replacement or Modification	Minor Capital Works	0.070	No
		254- Culvert Replacement or Modification	Minor Capital Works	0.924	No
		262- Level Crossing Upgrade (Civil)	Minor Capital Works	0.065	No
964	Murulla To Werris Creek	178- Rerailing	Minor Capital Works	3.704	No
		186- Turnout Renewal	Minor Capital Works	0.490	No
		223- Resleepering	Minor Capital Works	-0.036	No
		229- Track Strengthening / Upgrading	Minor Capital Works	2.031	No
		253- Bridge Replacement or Modification	Minor Capital Works	0.983	No
		254- Culvert Replacement or Modification	Minor Capital Works	0.902	No
		262- Level Crossing Upgrade (Civil)	Minor Capital Works	0.159	No
		772- Signalling System Upgrades	Minor Capital Works	0.059	No
965	Werris Creek To The Gap	223- Resleepering	Minor Capital Works	-0.006	No
			<b>TOTAL Network</b>	<b>112.240</b>	
			<b>TOTAL CONSTRAINED</b>	<b>101.658</b>	

## APPENDIX C - 1 January to 31 December 2013 Disposals

Line Segment	Activity	PROJECT	2013 RAB Value \$M	Disposal Proceeds \$M	Net Loss on Disposal \$M	Constrained Network (Yes / No)
930	Rerailing	Minor Capital Works	0.303	0.060	0.242	Yes
	116 points replaced	KCT Departure Road No. 3	0.006	0.000	0.006	Yes
	118A points replaced and relocated	KCT Departure Road No. 3	0.006	0.000	0.006	Yes
	118B points replaced and relocated	KCT Departure Road No. 3	0.006	0.000	0.006	Yes
	119 points removed	KCT Departure Road No. 3	0.006	0.000	0.006	Yes
	120A points removed	KCT Departure Road No. 3	0.006	0.000	0.006	Yes
	107N points motor	KCT Bypass Road Realignment	0.006	0.005	0.001	Yes
	108 points motor	KCT Bypass Road Realignment	0.006	0.005	0.001	Yes
	107N turnout	KCT Bypass Road Realignment	0.064	0.015	0.049	Yes
	108 turnout	KCT Bypass Road Realignment	0.064	0.015	0.049	Yes
936	Rerailing	Minor Capital Works	0.224	0.050	0.174	Yes
937	Rerailing	Minor Capital Works	0.380	0.034	0.346	Yes
947	Rerailing	Minor Capital Works	0.267	0.057	0.210	Yes
948	Rerailing	Minor Capital Works	0.282	0.058	0.224	Yes
955	Rerailing, Track Conditioning	Minor Capital Works	0.631	0.101	0.530	Yes
956	Rerailing, Track Conditioning	Minor Capital Works	0.203	0.029	0.174	Yes
957	Rerailing	Minor Capital Works	0.189	0.029	0.160	Yes
958	Rerailing	Minor Capital Works	0.083	0.012	0.070	Yes
	81A pts 271.895km 1:15 timber turnout + catchpoints	Drayton Junction Upgrade	0.153	0.002	0.151	Yes
	100 mtrs rail	Drayton Junction Upgrade	0.024	0.001	0.023	Yes
961	Rerailing	Minor Capital Works	0.296	0.046	0.250	Yes
	82A pts 272.000km 1:15 timber turnout + catchpoints	Drayton Junction Upgrade	0.099	0.002	0.097	Yes
	83 x-over 271.895km 1:15 timber x-over	Drayton Junction Upgrade	0.198	0.004	0.194	Yes
970	Rerailing	Minor Capital Works	0.121	0.017	0.104	Yes
971	Rerailing	Minor Capital Works	0.127	0.016	0.110	Yes
972	Rerailing, Level Crossing Upgrades	Minor Capital Works	0.258	0.032	0.226	Yes
973	Rerailing, Turnout replacement, Track Conditioning	Minor Capital Works	1.045	0.117	0.928	Yes
	Turnout+ 6100 catchpoints steel & plates	Bylong Loop Extension	0.115	0.015	0.100	Yes
	Points motors & rodding; turnout	Bylong Loop Extension	0.006	0.000	0.006	Yes
963	Rerailing, Turnout replacement, Transom replacement	Minor Capital Works	0.327	0.011	0.316	No
964	Rerailing, Turnout replacement, Transom replacement	Minor Capital Works	1.483	0.077	1.406	No
		<b>TOTAL NETWORK</b>	<b>6.982</b>	<b>0.810</b>	<b>6.172</b>	
		<b>TOTAL CONSTRAINED</b>	<b>5.171</b>	<b>0.721</b>	<b>4.450</b>	



# APPENDIX D - 1 January to 31 December 2013 RAB Floor Limit roll forward Summary

	Total	Constrained
CPI	2.055%	2.055%
Depreciation at 1 July 2011	4.7619%	4.7619%
Depreciation at 1 October 2011	4.8193%	4.8193%
Depreciation 2012	5.0000%	5.0000%
Depreciation 2013	5.2632%	5.2632%
<b>Opening Total RAB Floor Limit (1/01/2013)</b>	<b>1,551,340,789</b>	<b>1,271,436,792</b>
<b>Existing assets as at 1 January 2011</b>		
<b>Gross assets:</b>		
Opening Balance	1,051,755,653	878,616,766
<b>Additions / Deletions - Line Segments</b>	0	0
CPI	21,611,418	18,053,769
Original Balance plus CPI	1,073,367,070	896,670,535
Less Disposals	-6,171,987	-4,449,867
<b>Adjusted Net Balance</b>	<b>1,067,195,084</b>	<b>892,220,668</b>
<b>Depreciation:</b>		
% of year	100.0%	100.0%
Depreciation CY	-50,818,814	-42,486,698
CPI on Depreciation PY	-1,547,826	-1,290,408
Less Disposal Acc Depn	0	0
<b>Accumulated Depreciation</b>	<b>-127,694,189</b>	<b>-106,576,978</b>
<b>Closing Balance</b>	<b>939,500,895</b>	<b>785,643,690</b>
<b>New assets 1 July 2011 to 31 December 2011</b>		
<b>Gross assets:</b>		
Opening Balance	64,065,388	43,590,666
<b>Additions / Deletions - Line Segments</b>	0	0
CPI	1,316,412	895,699
Original Balance plus CPI	65,381,800	44,486,365
Less Disposals	0	0
<b>Adjusted Net Balance</b>	<b>65,381,800</b>	<b>44,486,365</b>
<b>Depreciation:</b>		
% of year	100.0%	100.0%
Depreciation CY	-3,150,930	-2,143,921
CPI on Depreciation PY	-79,113	-53,829
Less Disposal Acc Depn	0	0
<b>Accumulated Depreciation</b>	<b>-7,080,215</b>	<b>-4,817,442</b>
<b>Closing Balance</b>	<b>58,301,585</b>	<b>39,668,923</b>
<b>New assets 1 January 2012 to 31 December 2012</b>		
<b>Gross assets:</b>		
Opening Balance	527,894,841	425,280,946
<b>Additions / Deletions - Line Segments</b>	0	0
CPI	10,847,154	8,738,650
Original Balance plus CPI	538,741,995	434,019,596
Less Disposals	0	0
<b>Adjusted Net Balance</b>	<b>538,741,995</b>	<b>434,019,596</b>
<b>Depreciation:</b>		
% of year	100.0%	100.0%
Depreciation CY	-26,937,100	-21,700,980
CPI on Depreciation PY	-271,179	-218,466
Less Disposal Acc Depn	0	0
<b>Accumulated Depreciation</b>	<b>-40,405,650</b>	<b>-32,551,470</b>
<b>Closing Balance</b>	<b>498,336,346</b>	<b>401,468,126</b>
<b>New assets 1 January 2013 to 31 December 2013</b>		
<b>Gross assets:</b>		
Opening Balance	161,359,307	146,691,356
<b>Additions / Deletions - Line Segments</b>	0	0
CPI	0	0
Original Balance plus CPI	161,359,307	146,691,356
Less Disposals	0	0
<b>Adjusted Net Balance</b>	<b>161,359,307</b>	<b>146,691,356</b>
<b>Depreciation:</b>		
% of year	50.0%	50.0%
Depreciation CY	-4,246,298	-3,860,299
CPI on Depreciation PY	0	0
Less Disposal Acc Depn	0	0
<b>Accumulated Depreciation</b>	<b>-4,246,298</b>	<b>-3,860,299</b>
<b>Closing Balance</b>	<b>157,113,009</b>	<b>142,831,057</b>
<b>Total Closing RAB Floor Limit</b>	<b>1,653,251,834</b>	<b>1,369,611,796</b>
<b>Average RAB Floor Limit</b>	<b>1,602,296,312</b>	<b>1,320,524,294</b>
<b>Depreciation (includes CPI on depreciation for prior year)</b>	<b>-179,426,351</b>	<b>-147,806,188</b>
<b>RABsys</b>	<b>1,653,251,834</b>	<b>1,369,611,796</b>
<b>Net CPI Increase</b>	<b>31,876,865.53</b>	<b>26,125,413.53</b>

# APPENDIX E - 1 January to 31 December 2013 RAB FLOOR LIMIT VALUES BY SEGMENT & RAB VALUES BY SEGMENT

## 2013 RAB FL VALUES BY SEGMENT

DORC Segment Code	Schedule E Code	Description	Constrained 1 January to 31 December 2013	CLOSING 2012 RAB FL Value (\$)	OPENING Jan 2013 RAB FL Value (\$)	CLOSING Jan to Dec 2013 RAB FL Value (\$)	Average Jan to Dec 2013 Closing RAB FL Value (\$)
974	974	Wilpinjong To Ulan Colliery Jct	Yes	12,862,636	12,862,636	12,453,760	12,658,198
973	973	Sandy Hollow Jct To Wilpinjong	Yes	134,464,575	134,464,575	163,251,919	148,858,247
972	972	Anvill Hill to Sandy Hollow Jct	Yes	38,841,728	38,841,728	39,007,516	38,924,622
971	971	Bengalla Jct To Anvill Hill	Yes	19,276,646	19,276,646	18,853,350	19,064,998
0	0	Spare	No	0	0	0	0
970	970	Muswellbrook To Bengalla Jct	Yes	24,644,936	24,644,936	25,827,613	25,236,274
961	961	Draytons Jct To Muswellbrook	Yes	97,681,949	97,681,949	94,788,642	96,235,295
958	958	Newdell Jct To Draytons Jct	Yes	27,757,485	27,757,485	48,308,256	38,032,870
957	957	Glennies Creek To Newdell Jct	Yes	12,488,035	12,488,035	12,475,679	12,481,857
956	956	Camberwell Jct To Glennies Creek	Yes	47,086,669	47,086,669	50,265,364	48,676,016
955	955	Whittingham To Camberwell Jct	Yes	66,903,955	66,903,955	68,961,325	67,932,640
948	948	Branxton To Whittingham	Yes	248,805,447	248,805,447	257,191,710	252,998,578
947	947	Farley To Branxton	Yes	341,336,915	341,336,915	348,571,415	344,954,165
946	946	Maitland To Farley	Yes	15,375,675	15,375,675	16,582,800	15,979,238
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
937	937	Thornton To Maitland (Via Coal)	Yes	33,779,810	33,779,810	35,080,419	34,430,114
936	936	Sandgate To Thornton (Via Coal)	Yes	95,759,687	95,759,687	93,699,541	94,729,614
926	926	Hanbury Jct To Sandgate (Via Coal)	Yes	2,595,446	2,595,446	2,512,942	2,554,194
925	925	Waratah To Hanbury Jct (Via Coal)	Yes	4,013,313	4,013,313	3,885,668	3,949,490
917	917	Scholey St Jct To Waratah (Via Coal)	Yes	3,153,183	3,153,183	3,052,927	3,103,055
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
915	915	Islington Jct To Scholey St Jct	No	1,627,952	1,627,952	1,576,203	1,602,077
916	916	Scholey St Jct To Port Waratah	Yes	10,802,173	10,802,173	11,006,065	10,904,119
0	0	Spare	No	0	0	0	0
931	931	Kooragang East Jct To Sandgate	Yes	941,826	941,826	911,799	926,812
927	927	Hanbury Jct To Kooragang East Jct	No	1,608,696	1,608,696	1,557,559	1,583,128
929	929	Kooragang East Jct To NCIG	Yes	1,544,209	1,544,209	1,495,122	1,519,665
930	930	NCIG To Kooragang Island	Yes	18,505,804	18,505,804	49,760,474	34,133,139
0	0	Spare	No	0	0	0	0
951	951	Whittingham To Saxonvale Jct	Yes	5,750,926	5,750,926	5,490,612	5,620,769
952	952	Saxonvale Jct To Mount Thorley	Yes	2,109,662	2,109,662	2,042,601	2,076,131
959	959	Newdell Branch	Yes	4,954,104	4,954,104	4,134,280	4,544,192
944	944	Telarah To Farley	No	1,087,531	1,087,531	1,052,960	1,070,246
0	0	Spare	No	0	0	0	0
0	0	Spare	No	0	0	0	0
968	968	Boggabri Jct to Turrawan Jct	No	0	0	0	0
967	967	Gunnedah Jct to Boggabri Jct	No	0	0	0	0
966	966	The Gap To Gunnedah Jct	No	0	0	0	0
965	965	Werris Creek To The Gap	No	6,322,326	6,322,326	6,114,517	6,218,421
964	401	Murulla To Werris Creek	No	171,022,279	171,022,279	176,156,075	173,589,177
963	401	Dartbrook Jct To Murulla	No	74,566,669	74,566,669	74,266,419	74,416,544
962	962	Muswellbrook To Dartbrook Jct	No	23,668,545	23,668,545	22,916,305	23,292,425

Constrained	1,271,436,792	1,271,436,792	1,369,611,796	1,320,524,294
Network	1,551,340,789	1,551,340,789	1,653,251,834	1,602,296,312

## 2013 RAB VALUES BY SEGMENT

DORC Segment Code	Schedule E Code	Description	Constrained 1 January to 31 December 2013	CLOSING 2012 RAB FL Value (\$)	OPENING Jan 2013 RAB FL Value (\$)	CLOSING Jan to Dec 2013 RAB FL Value (\$)	Average Jan to Dec 2013 Closing RAB FL Value (\$)
965	965	Werris Creek To The Gap	No	6,588,594	6,588,594	6,379,817	6,484,206
964	401	Murulla To Werris Creek	No	177,668,872	177,668,872	183,376,889	180,522,880
963	401	Dartbrook Jct To Murulla	No	75,689,360	75,689,360	72,187,641	73,938,501
962	962	Muswellbrook To Dartbrook Jct	No	26,071,662	26,071,662	26,310,473	26,191,068

RAB Total	286,018,488	286,018,488	288,254,821	287,136,655
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# APPENDIX F - Interest During Construction - 1 January to 31 December 2013

## Calculation of Interest During Construction

Rate of Return - IPART	10.92%
Rate of Return - HVAU	11.83%

6928 - Drayton Junction Upgrade (Capital)	958	2006/07	2007/08	2008/09	2009/10	2010/11	2011 H2	2012	2013
Commissioning Month/Year	18-May-13								
Capital Spend (\$'000)		-	-	-	-	239,980	1,078,460	11,051,285	7,561,446
IDC on Capex incurred during year		-	-	-	-	13,103	31,895	653,684	447,260
Previous Years Interest Capitalisation		-	-	-	-	-	14,970	163,066	783,527
<b>Total Capitalised Interest</b>		-	-	-	-	13,103	46,865	816,749	1,230,787
									<b>2,107,504</b>

8666 - KCT Bypass Road Realignment	930	2006/07	2007/08	2008/09	2009/10	2010/11	2011 H2	2012	2013
Commissioning Month/Year	17-May-13								
Capital Spend (\$'000)		-	-	-	-	-	-	3,400	1,425,208
IDC on Capex incurred during year		-	-	-	-	-	-	201	84,301
Previous Years Interest Capitalisation		-	-	-	-	-	-	-	213
<b>Total Capitalised Interest</b>		-	-	-	-	-	-	201	84,514
									<b>84,715</b>

5757 - Bylong Loop Extension	973	2006/07	2007/08	2008/09	2009/10	2010/11	2011 H2	2012	2013
Commissioning Month/Year	16-Mar-13								
Capital Spend (\$'000)		-	-	-	-	568,565	2,830,921	17,703,661	4,532,761
IDC on Capex incurred during year		-	-	-	-	31,044	83,724	1,047,172	268,113
Previous Years Interest Capitalisation		-	-	-	-	-	35,467	419,932	1,343,917
<b>Total Capitalised Interest</b>		-	-	-	-	31,044	119,191	1,467,104	1,612,030
									<b>3,229,368</b>

## APPENDIX G - Stakeholder Listing

Deleted for privacy reasons