



AUSTRALIAN RAIL TRACK CORPORATION LTD

**1 JANUARY TO 31 DECEMBER 2012  
SUBMISSION**

to

**AUSTRALIAN COMPETITION & CONSUMER  
COMMISSION**

in respect of

**HUNTER VALLEY ACCESS UNDERTAKING**

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



# CONTENTS

<b>1. INTRODUCTION &amp; BACKGROUND.....</b>	<b>4</b>
1.1. 2011 HUNTER VALLEY COAL NETWORK ACCESS UNDERTAKING REQUIREMENTS.....	4
1.2. FORM OF THIS SUBMISSION .....	5
<b>2. RAB ROLL FORWARD.....</b>	<b>7</b>
2.1. COMPONENT CALCULATION .....	7
2.2. COMPONENT VALUES .....	8
2.2.1. RAB Start (RAB $t-1$ start) .....	8
2.2.2. Rate of Return (RoR).....	9
2.2.3. Revenue [Out-turn Revenue $_{t-1}$ ].....	9
2.2.4. Operating Expenditure [Out-turn Opex $_{t-1}$ ].....	9
2.2.5. Net Capital Expenditure [Net Capex $_{t-1}$ ].....	9
2.3. OUTCOME AND CLOSING VALUES .....	10
<b>3. RAB FLOOR LIMIT ROLL FORWARD .....</b>	<b>11</b>
3.1. COMPONENT CALCULATION .....	11
3.2. COMPONENT VALUES .....	12
3.2.1. RAB Floor Limit Opening Value [RAB Floor Limit $_{t-1}$ start].....	12
3.2.2. Consumer Price Index [CPI $_{t-1}$ ].....	12
3.2.3. Net Capital Expenditure [Net Capex $_{t-1}$ ] .....	12
3.2.4. Depreciation [Depreciation $_{t-1}$ ].....	13
3.3. OUTCOME AND CLOSING VALUES .....	14
3.4. PRICING ZONE 3 RAB AND RAB FLOOR LIMIT COMPARISON.....	14
<b>4. CAPITAL EXPENDITURE .....</b>	<b>16</b>
<b>5. DISPOSALS.....</b>	<b>17</b>
<b>6. CONTACT DETAILS - STAKEHOLDERS .....</b>	<b>18</b>
<b>7. CEILING TEST.....</b>	<b>19</b>
7.1. COMPLIANCE SCOPE.....	19
7.2. ACCESS REVENUE .....	20
7.3. FULL ECONOMIC COST.....	21
7.3.1. Maintenance costs.....	21
7.3.2. Network Control.....	23
7.3.3. Corporate Overheads.....	24
<b>8. UNDERS &amp; OVERS ACCOUNTING.....</b>	<b>25</b>
8.1. 1 JANUARY TO 31 DECEMBER 2012 UNDERS & OVERS BALANCE .....	25
8.2. OPERATION OF THE UNDERS AND OVERS ACCOUNT.....	26
<b>9. PRICING ZONE 3 - INTERIM INDICATIVE ACCESS CHARGES .....</b>	<b>27</b>
<b>10. SYSTEM WIDE TRUE UP TEST AUDIT.....</b>	<b>28</b>
<b>11. CONTACT DETAILS (ARTC).....</b>	<b>30</b>
<b>APPENDIX A - HVAU SCHEDULE E .....</b>	<b>31</b>
<b>APPENDIX B - 1 JANUARY TO 31 DECEMBER 2012 MAJOR CAPITAL EXPENDITURE INCLUDED IN THE RAB/RAB FLOOR LIMIT .....</b>	<b>32</b>
<b>APPENDIX C - 1 JANUARY TO 31 DECEMBER 2012 DISPOSALS.....</b>	<b>33</b>
<b>APPENDIX D - 1 JANUARY TO 31 DECEMBER 2012 RAB FLOOR LIMIT ROLL FORWARD SUMMARY .....</b>	<b>34</b>

**APPENDIX F - INTEREST DURING CONSTRUCTION - 1 JANUARY TO 31 DECEMBER 2012..... 36**  
**APPENDIX G - STAKEHOLDER LISTING ..... 37**  
**DELETED FOR PRIVACY REASONS..... 37**

# 1. Introduction & Background

Terms used in this submission are as per the 2011 Hunter Valley Coal Network Access Undertaking (“2011 HVAU”) unless otherwise obvious from the context.

## 1.1.2011 Hunter Valley Coal Network Access Undertaking requirements

In accordance with the 2011 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 2011 HVAU.

The purpose of this submission is to demonstrate ARTC’s compliance with the requirements of Section 4.10 of the 2011 HVAU for the period 1 January 2012 to 31 December 2012 (“Compliance Period”). This submission is intended by ARTC to meet the information requirements detailed in clause 2 of Schedule G of the 2011 HVAU provided at Attachment 1.

Under Section 4.10 of the 2011 HVAU, the ACCC is required to determine whether ARTC has undertaken:

- roll-forward of the RAB and RAB Floor Limit in accordance with the 2011 HVAU and, where the roll forward is not in accordance with the 2011 HVAU, determine what closing RAB or RAB Floor Limit would be in accordance with the 2011 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 2011 HVAU, and where the calculations are not in accordance with the 2011 HVAU, determine what total unders and overs amount or allocation would be in accordance with the 2011 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 2011 HVAU, the ACCC may have regard to the submissions of relevant industry participants but if Capital Expenditure has been

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

endorsed by the RCG in accordance with Section 9 of the 2011 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 2011 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 2011 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 2011 HVAU.

Table 1 Submission Layout

Section	Title	Relevant requirement at clause 2 of Schedule G of the 2011 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 2011 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)

## 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 2011 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 2011 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 2011 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).

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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> end:	the RAB at the end of the preceding calendar year (t-1).
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 H2 2011 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 2011 HVAU and has determined the closing asset values for assets ascribed a regulatory asset value under the 2011 HVAU as at 31 December 2012 as shown in Table 2:

Table 2 Relevant asset values for assets ascribed a regulatory asset value under the 2011 HVAU (\$ nominal)



Pricing Zone 3 RAB Value	31-Dec-11
Pricing Zone 3 RAB Value	\$192,214,184

### 2.2.2. Rate of Return (RoR)

In accordance with Section 4.4(a) of the 2011 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 2012, as contemplated under the 2011 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 \$28,777,506. This consists of the return earned on existing assets [ $\text{RoR} \times \text{RAB}_{t-1}$  start], \$22,738,938 with a further \$6,038,568 on assets commissioned during the Compliance Period [ $\text{Net Capex}_{t-1} \times (1 + 0.5 \times \text{RoR})$ ].

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

For the period of assessment 1 January to 31 December 2012 the Out-turn revenue is \$42,878,785.

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

Operating expenditure in Pricing Zone 3 for the Compliance Period is \$12,420,623. This expenditure is made up of the following:

• Variable Track Maintenance	\$	3,030,986
• Fixed Track Maintenance	\$	5,304,695
• Asset Management Overheads	\$	1,370,891
• Network Control	\$	1,480,915
• Corporate Overheads	\$	1,233,135
	\$	12,420,623

### 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 \$96,228,800.

Major capital expenditure of \$74,649,972 was attributed to the RAB with an additional \$28,773,707 in Minor Capital also added to the RAB during the Compliance Period.

Interest during construction of \$6,123,253.99 has been included in the cost of major capital for Pricing Zone 3.

Disposals for the Compliance Period amount to \$7,194,879.

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 2011 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.

Table 3 Pricing Zone 3 RAB roll forward

Value		Unconstrained	Constrained
<b>Opening RAB</b>	<i>RAB t-1 start</i>	\$ 192,214,184	-
Return On Opening RAB	<i>RoR x RABt-1 start</i>	\$ 22,738,938	-
Less Revenue	<i>Out-turn Revenuet-1</i>	-\$ 42,878,785	-
Plus Opex	<i>Out-turn Opext-1</i>	\$ 12,420,623	-
Plus Net Capex	<i>Net Capext-1</i>	\$ 96,228,800	-
Plus Return On Capex	<i>Net Capext-1 x (1 + 0.5 x RoR)</i>	\$ 5,691,933	-
<b>Closing RAB</b>	<i>RABt-1 end</i>	\$ 286,415,693	-

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 2011 HVAU.

### 3. RAB Floor Limit Roll Forward

#### 3.1. Component Calculation

In accordance with Section 4.4(b) of the 2011 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 2011 HVAU RAB Floor Opening Value is equal to the closing RAB Floor Limit approved by the ACCC for the half year compliance period ending 31 December 2011.

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

In accordance with clause 4.4(b) of the 2011 HVAU, CPI has been calculated to be 2.302%. The rate has been determined based on the variation in CPI from September 2011 (All Sydney) of 99.9 and September 2012 (All Sydney) of 102.2.

For the Compliance Period CPI has been applied to the RAB Floor Limit Opening Value increasing the RAB Floor Limit by \$24,717,225.

### 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) of \$536,529,398 to the RAB Floor Limit.

Major capital additions total \$496,961,429 including interest during construction of \$52,473,777 (as per Table 4 below) and minor capital of \$39,567,969 has 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 \$9,345,385. Appendix C provides a listing of disposals.

Capital additions commissioned during the Compliance Period are 'deemed' to have been commissioned at the mid-point of the Compliance Period (1 July 2012) for the purposes of determining Depreciation. Financing costs and return are also determined on a consistent basis.

Table 4

Project Name	Interest During Construction
Maitland to Minimbah Third Road - Stage 2	\$40,307,605.84
Nundah - Third Track	\$6,042,917.30
Bells Gate Passing Loop	\$2,684,609.09
Pages River Passing Loop	\$1,726,040.38
Chilcotts Creek Passing Loop	\$1,712,604.52
<b>Total Interest During Construction 2012</b>	<b>\$52,473,777.14</b>

Refer to Section 4 of this document for supporting data and Appendix B for a detailed list of the Major Capital additions by Segment and confidential Attachment 2 for Minor Capital.

### 3.2.4. Depreciation [Depreciation<sub>t-1</sub>]

Section 4.7 of the 2011 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 2011 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 2012, Depreciation will be determined for the Compliance Period, with CPI applied as per 2011 HVAU. The applicable remaining useful life for these assets as at 1 January 2012 is 20.5 years.

Assets commissioned during the Compliance Period are 'deemed' to have been commissioned at the mid-point of the Compliance Period (1 July 2012) for the purposes of determining Depreciation. The applicable remaining useful life for these assets as at 1 July 2012 is 20 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 2011 HVAU, as appropriate.

Total depreciation charged is \$66,543,599, split between \$53,130,364 for existing assets and \$13,413,235 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 1 January to 31 December 2012, the closing values for the ARTC Hunter Valley Coal Network can be determined for the total network and for the constrained network.

The results are summarised in Table 5 below.

Table 5 RAB Floor Limit roll forward

Values		Value	Network
<b>Opening Value</b>	<i>RAB Floor Limit<sub>t-1</sub> start</i>		\$ 1,073,587,301
CPI	<i>CPI<sub>t-1</sub></i>	2.302%	\$ 24,717,225
Cap Ex	<i>Net Capex<sub>t-1</sub></i>		\$ 527,184,013
Depreciation	<i>Depreciation<sub>t-1</sub></i>		-\$ 66,543,599
<b>Closing Value</b>			\$ 1,558,944,941

Appendix E presents the opening, average and closing RAB Floor Limit values for each Segment 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 2011 HVAU.

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

Table 6

Values			PZ 3
<b>Opening Value</b>	<i>RAB Floor Limit<sub>t-1</sub> start</i>		\$ 186,996,217
CPI	<i>CPI<sub>t-1</sub></i>	2.302%	\$ 4,305,218
Cap Ex	<i>Net Capex<sub>t-1</sub></i>		\$ 96,228,800
Depreciation	<i>Depreciation<sub>t-1</sub></i>		-\$ 11,574,613
<b>Closing Value</b>			\$ 275,955,622

Table 3 above shows a closing RAB value for Pricing Zone 3 assets for the Compliance Period of \$286,415,693. Table 6 above shows a closing RAB Floor Limit value for Pricing Zone 3 assets for the Compliance Period \$275,955,622.

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 2011 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 2011 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 3) describes ARTC's relevant compliance activities, and industry endorsement, with regard to the Compliance Period. It should be noted that the RCG was not formally convened for the whole of the Compliance Period. Instead, the Rail Infrastructure Group (RIG) which operates to ensure ARTC complies with the consultation requirements under the NSWRAU was continued during the Compliance Period as an interim substitute mechanism for the RCG. Nevertheless, the RIG consisted of similar industry representation and consultation was carried out during the Compliance Period on a basis similar to that contemplated for the RCG under the 2011 HVAU.

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 Capital Expenditure for each project commissioned during the Compliance Period. Minor capital has been detailed in confidential Attachment 2, together with the Segment that the Capital Expenditure relates to.

Evidence of Access Seekers endorsement of Capital Expenditure as required under Schedule G of the 2011 HVAU is provided in Attachment 4 (not for publication).



## 5. Disposals

Capital works resulted in asset disposals for the Compliance Period amounting to \$9,345,385. 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). An electronic copy of the spreadsheet calculating the RAB disposal values and net loss on disposals referenced, where possible, to the Booz Allen DORC database is confidentially provided to the ACCC as part of this submission.

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 2011 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 mines or a combination of mines against the applicable Ceiling Limit to determine the Constrained Network and Constrained Group of Mines as contemplated under the 2011 HVAU.

The Ceiling Test Model calculates the amount of Access Revenue and the Economic Cost across the Network Segments utilised by mine or a combination of mines. This allows for testing combinations of mines, including those combinations that could potentially fail the Ceiling Test (i.e. where Access revenue for that 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 Network 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. A comparison with revenue and costs associated with the constrained network as determined by ACCC in relation to 1 July to 31 December 2011 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 2011 HVAU.

**CEILING TEST DEC 2012**

**TABLE 7**

		ARTC Total	ARTC Total
		H2 2011	December 2012
		Actuals	Actuals
<i>millions</i>		Actuals	Actuals
<b>GTKs</b>		<b>GTK</b>	<b>GTK</b>
	<i>Export</i>	10.70	22.26
	<i>Domestic</i>	0.66	1.46
	<b>Total</b>	<b>11.35</b>	<b>23.71</b>
<b>Revenue</b>			
	<b>Total Revenue</b>	<b>95.56</b>	<b>241.82</b>
<b>Operating Costs</b>			
	<b>Infrastructure Costs</b>		
	<i>Variable</i>	9.15	27.15
	<i>Fixed</i>	7.54	23.82
	<i>Shared Maintenance</i>	7.86	18.27
	<b>Total Maintenance Costs</b>	24.55	69.23
	<i>Expensed Project Costs</i>		1.50
	<b>Total Infrastructure</b>	24.55	70.73
	<i>Network Control</i>	3.40	9.30
	<i>Corporate Overheads</i>	5.65	12.31
	<b>Total Operating Cost</b>	<b>33.59</b>	<b>92.34</b>
	Depreciation	21.00	54.75
	Net Loss on Disposal	0.89	2.15
	<b>Total Cost</b>	<b>55.48</b>	<b>149.24</b>
	<b>Profit/Loss</b>	<b>40.08</b>	<b>92.59</b>
	Total ROA	39.36	98.32
	<b>Full Economic Costs</b>	<b>94.83</b>	<b>247.55</b>
	<b>Revenue - Costs</b>	<b>0.73</b>	<b>-5.73</b>
	<b>Average Asset Base</b>	<b>864.08</b>	<b>1080.41</b>

## 7.2. Access Revenue

Clause 4.3(a) of 2011 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 2011 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 2011 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 \$241.82million.

Constrained Coal volumes for the Compliance Period of 120.2 mT (compared to that occurring in the 1 July to 31 December 2011 compliance period, 56.3mT) 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.

GTKs for the Constrained Group of Mines have not increased in alignment with the coal volumes. The GTKs reported are as expected and reflect the volumes transported from the mines for the Compliance Period. A change in the number paths utilised by Access Holders between H2 2011 and 2012 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 2011 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 H2 2011, when considered on a full year basis, and with maintenance costs forecast for 2012 as advised to Access Holders in pricing advice provided in late 2011 in accordance with the requirements of the 2011 HVAU.

In that advice, an increase in fixed maintenance expenditure to that in 2011 was forecast to occur in 2012 largely due to a cyclic ballast cleaning program in Pricing Zone 2 commencing in 2012 (extending through to 2014). In addition mud hole rectification in Pricing Zone 1 was expected. An unexpected cost in fixed maintenance of \$1.5M arose through the expensing of project costs for the Bengalla Loop.

In that advice, maintenance expenditure was forecast to increase by around 36% over that in 2011 to reflect increased cyclic activity and volumes. Actual maintenance expenditure in 2012 was only 21% over that advised in 2011 due largely to the lower than expected task.

Actual variable maintenance expenditure was around 16% lower than forecast in the advice, which is consistent with lower than forecast volumes. Excluding project cost expensed, fixed maintenance expenditure was 1% higher than forecast reflecting the advised forecast increase in cyclic maintenance activity on the network rather than volume.

Shared Maintenance has seen a 12% (real) increase over H2 2011, amounting to \$2.23M (adjusted for CPI). This increase reflects a step change in resourcing required for the Hunter Valley Coal Network. ARTC maintained the existing headcount from 2008 until 2012 for the Coal Network. As a result temporary contractors and consultants were used to supplement the existing workforce. Access Holders Agreements commit ARTC to provide a network that is fit for purpose and able to manage the volume growth contracted in 2012. ARTC has recruited in advance of this growth to provide continuity of service delivery as required by contracts with Access Holders.

The new roles include:

- 2 x Project Managers - Project Delivery - commenced H2 2012
- 1 x Heavy Haul Manager
- 1 x Delivery Manager Hunter Valley
- 1 x Delivery Engineer Maitland
- 3 x Infrastructure & Planning Resources

### 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 2011 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 \$8.94M, have increased based on a full year comparison with network control costs approved by ACCC for H2 2011. Primary contributors to the increase in the provision of Network Control include:-

- Transitioning Costs for new staff associated with high 2011 staff turnover. Thirteen new Network controllers commenced in calendar 2012 compared to eight in calendar 2011. The final quarter of 2011 experienced an unusually high staff turnover. To ensure the ongoing safety and efficient operation of the network vacancies are covered with the use of overtime for existing Network Control staff, with these costs continuing during the months required for new staff to become competent through provision of job specific training, largely provided in house, as well as a period of on the job side-by-side training to develop business and day of operations experience enabling the recruited replacement to carry out the controller function solo.
- New positions to support the ARTC functions within the HVCCC sponsored Integrated Live Run approach. In 2011 a coal chain service provider process resulted in a HVCCC Board supported initiative to provide tools and processes to an Integrated Live Run team approach to managing day of operations disruptions. Commensurate with the ARTC's unique position within the coal chain and the new subsequent partially formed tools and processes, ARTC allocated extra network controller resources to fulfil the functions identified by the process to complement the newly created HVCCC roles "LR Coordinator".
- New positions to enable workload management required due to growth of the Ulan line and Gunnedah basin volumes. Historically train control management of the Ulan line and Gunnedah basin line to Werris Creek was able to be managed by a single train control board, but following the consideration of a number of factors and

formidable growth forecasts five extra employees were engaged in 2012 in anticipation of the introduction of a separate fulltime board to manage the Ulan branch traffic.

### **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 2011 HVAU.

Corporate overhead costs are largely in alignment with H2 2011(refer Table 7) based on a full year comparison for the Compliance Period, with a small increase on H2 2011 Corporate Overheads of \$609k (when adjusted for CPI). This reflects the increased share of Constrained Coal Train Kms of total ARTC Network Train Kms compared to that of H2 2011.



## 8. Unders & Overs Accounting

### 8.1. 1 January to 31 December 2012 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 half of the real Return of 9.10% based on the average RAB Floor Limit for the 1 January to 31 December 2012 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 1 January to 31 December 2012 Compliance Period as contemplated at Section 4.9 of the 2011 HVAU and as otherwise agreed with the ACCC (refer section 2.1 of this submission), as shown in Table 8 below.

Table 8

	ARTC TOTAL	
	H2 2011	December 2012
<i>millions</i>	Actuals	Actuals
<b>ARTC Unders/Overs</b>		
Opening Value	-20.93	0.73
Refunds/Payments	20.93	-0.73
Yearly adjustment	0.73	-5.73
Closing Value	<b>0.73</b>	<b>-5.73</b>

The unders and overs amount for 1 July to 31 December 2011 compliance period reflects the ACCC's determination with respect to its assessment in 2012 in accordance with the 2011 HVAU. It is ARTC's intention to bring this amount to zero as at 30 April 2013, by refunding \$0.73M to relevant rail operators.

ARTC's 2012 Interim Indicative Access Charges and other Charges that applied during the Compliance Period were based on a forecast volume of 125M nett tonnes for constrained export coal and 8.2M nett tonnes for constrained domestic coal for the 2012 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. Actual volumes during the Compliance Period were below the forecast. This is the principal reason 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 2011 HVAU. The relativity of the under recovery to the actual volumes railed demonstrates the robustness of the modelling used to determine 2012 Interim Indicative Access Charges, 2012 Initial Indicative Access Charges and other Charges, and ARTC's control of efficient costs.

As requested by the ACCC on 19<sup>th</sup> April 2013, a separate confidential analysis of unit costs will be provided 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 July to 31 December 2011 total unders and overs amount and unders and overs account balances with relevant Access Seekers in accordance with the 2011 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).

As Access revenue has been earned during the Compliance Period under Access Agreements with both Access Holders and rail operators, Constrained Coal Customer Accounts have been established for Access Holders only for the Compliance Period.

## 9.Pricing Zone 3 - Interim 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 Interim 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 2011 HVAU (Section 4.2(d) of a version submitted to the ACCC on 7 September 2010). This section was not retained in the 2011 HVAU and, as such the provision of information under Section 2(d) of Schedule G of the 2011 HVAU, is no longer relevant to this compliance review.

Nevertheless, ARTC has provided in Table 9 below, 2012 Interim Indicative Access Charges for Pricing Zone 3, applicable during the Compliance Period, and 2011 Interim Indicative Access Charges for Pricing Zone 3 proposed to the ACCC as part of the earlier version of the 2011 HVAU submitted to the ACCC on 7 September 2011 at Table 10 below.

Table 9 - 2012 Pricing Zone 3 Interim Indicative Access Charges

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

Table 10 - 2011 Pricing Zone 3 Interim Indicative Access Charges (proposed to the ACCC as part of ARTC's submission of an earlier version of the 2011 HVAU on 7 September 2010)

Pricing Zone 3 - 2011			
	Non-TOP \$/kgtkm	TOP \$/kgtkm	
Indicative Service 1	0.769	5.575	25 tonne maximum axle load
			80kph maximum speed (loaded)
			80kph maximum speed (empty)
			72 wagon train length
			section run times as per applicable Hunter Valley standard working timetable

## 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.

An Annual True Up Test was performed for the period 1 February to 31 December 2012, the period of where executed Access Holder Agreements were operational.

A copy of the Audit Report has been provided at Attachment 5 to this submission.

The Audit Report concludes that ARTC is not liable for any rebates under the True Up Test for 2012 due to System Availability Shortfall. The report includes details of immaterial issues that ARTC has sought to address as noted below.

<b>BDO audit findings</b>	<b>ARTC management response</b>
<p>A comparison of the final outputs of the ‘cancellation to system losses’ model against the data entered into the TUT model revealed a number of small variances over the year. These variances are summarised in appendix 1, table 1.</p>	<p>Variances are due to HVCCC cancellation data altering between monthly categorisation and TUT finalisation. The cancellation process involves a review/arbitration procedure in which system losses initially allocated to a service provided may be subsequently re-allocated on investigation. ARTC will update the true up test procedure to ensure that the variances are captured and noted as a part of the annual reconciliation.</p>
<p>A contract variation was signed by an Access Holder in the second half of the year which altered their train path schedule from the beginning of July 2012 onwards. Although this change was reflected in the allocations of actual Base Path Usage (BPU) used for the Access Holder, the sculpted Base Path Usage inputs into the TUT were not updated. As this contract variation was a reduction in train paths this resulted in sculpted BPUs being overstated by 55 paths over the relevant six month period. As the system was not in a shortfall position in any of the TUT periods, this had no effect on the result of any TUT’s.</p>	<p>Re-sculpt values were omitted from the true up test, however there is no material impact to either entitlement or subsequent annual reconciliation. The categorisation model used for allocation of path usages types was updated at the time of the variation and therefore paths were appropriately categorised. ARTC will update procedures to ensure that changes to contracted path entitlements are flowed through to all models utilising this data.</p>
<p>The individual access holder’s tolerance limit for two Access Holders were understated by 3 paths respectively for the months of July to December 2012. 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 (September) for one Access Holder where this exception has affected the usage inputs included in the TUT, overstating ad-hoc paths (increasing TPR). As there was a system availability surplus there was no effect on the result of the relevant TUT.</p>	<p>An incorrect vlookup algorithm failed to adjust the tolerance increase. ARTC has implemented a change to the categorisation model eliminating the potential for this to occur in future.</p>
<p>A number of small variances were identified between the final outputs of the categorisation model and the data input into the TUT. A summary of these variances over the year have been summarised in appendix 1, table 2.</p>	<p>The monthly and quarterly true up test is a snap shot in time and as such there are movements in the path usages following the initial categorisation of path usages and finalisation of the true up test. ARTC will update the true up test procedure to ensure that changes to path usages is noted and flowed through to appropriate models. The annual</p>

	reconciliation will encompass all path categorisation changes to ensure system availability appropriately updated.
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.
<p>In determining the total BPUs, ARTC has a debateable interpretation of the below clause in relation to the ad-hoc paths number used in the TUT:</p> <p><b><i>2.2(a) (ii) the aggregate ad hoc path usages provided in the period in respect of which a coal train is operated and,</i></b></p> <p><b><i>(a) if the relevant period is a month, the aggregate quarterly base path usages in respect of which a coal train was actually operated in that month, or</i></b></p> <p><b><i>(b) if the relevant period is a quarter, the aggregate monthly base path usages in respect of which a coal train was actually operated in that quarter</i></b></p> <p><b><i>We believe the above clause states that for both monthly and quarterly TUTs the ad-hoc path usages as per the TPR calculation should include the aggregate ad-hoc paths used for both monthly and quarterly customers and the deemed ad-hoc paths as per the TPR calculation should include, for monthly TUTs the actual BPUs used for quarterly customers and for quarterly TUTs vice versa.</i></b></p> <p><b><i>While this has been performed for the monthly TUT access holders, for quarterly access holders, the ad hoc path usages number was set up as:</i></b></p> <p><b><i>O the aggregate ad hoc path usages provided, in accordance with above , and;</i></b></p> <p><b><i>O the sculpted (contracted) base path usages for monthly customers, instead of actual BPUs used, which will always yield a higher number than actual BPUs used.</i></b></p> <p>While slightly different to the requirements as set out above, this interpretation calculates a higher TPR in the test, making it less likely to record a system surplus and produces a result that is more consistent with the results of the monthly true-up tests over the same period.</p>	<p>ARTC notes BDO's comments regarding the interpretation ARTC has applied to ad hoc path usages through the true up test for monthly and quarterly allocation periods, in that it applies a harder test to achieve system availability surplus.</p> <p>ARTC intends to revise the interpretation used in the true up test model for 2013 to align with clause 2.2(a) (ii). A review of results for the calendar year to date will be carried out and adjusted results will be published.</p>
In march 2012, the published results for the monthly true-up tests for pricing zone 1 and 2 were inconsistent with the ARTC workings and appeared to be the results of the quarterly true-up tests for the march 2012 quarter.	ARTC had incorrectly published the March 2012 quarterly results as both the monthly results and quarterly results. The correct results for March 2012 have now been published

## 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 2012 Major Capital Expenditure included in the RAB/RAB Floor Limit

<b>Appendix B:</b>		<b>MAJOR CAPITAL WORKS</b>				
<b>Sector / Segment #</b>	<b>Line Segment</b>	<b>Activity</b>	<b>CAPEX Project Type</b>	<b>Capital Expenditure \$M</b>	<b>Written Down Value \$M</b>	<b>Constrained Network (Yes / No)</b>
947	Farley to Branxton	5255 - Maitland to Minimbah Third Road - Stage 2	Major Capital Works Project	166.663		Yes
		Interest During Construction		21.034		Yes
948	Branxton to Whittingham	5255 - Maitland to Minimbah Third Road - Stage 2	Major Capital Works Project	139.231		Yes
		Interest During Construction		19.274		Yes
955	Whittingham to Camberwell Jct	5811 - Nundah – Third Track	Major Capital Works Project	35.457		Yes
		Interest During Construction		2.874		Yes
956	Camberwell Jct to Glennies Creek	5811 - Nundah – Third Track	Major Capital Works Project	34.610		Yes
		Interest During Construction		3.169		Yes
964	6724 - Bells Gate Passing Loop	6724 - Bells Gate Passing Loop	Major Capital Works Project	20.492		No
		Interest During Construction		2.685		No
964	6891 - Pages River Passing Loop	6891 - Pages River Passing Loop	Major Capital Works Project	22.024		No
		Interest During Construction		1.726		No
964	6892 - Chilcotts Creek Passing Loop	6892 - Chilcotts Creek Passing Loop	Major Capital Works Project	26.011		No
		Interest During Construction		1.713		No
			<b>TOTAL Network</b>	<b>496.961</b>	<b>0.000</b>	
			<b>TOTAL CONSTRAINED</b>	<b>419.143</b>	<b>0.000</b>	



## APPENDIX C - 1 January to 31 December 2012 Disposals

Line Segment	Activity	PROJECT	2012 RAB Value \$M	Net Loss on Disposal \$M	Constrained Network (Yes / No)
917	Rerailing	Rerailing	26.710	18.443	Yes
925	Rerailing	Rerailing	67.313	56.755	Yes
931	Rerailing	Rerailing	82.272	70.703	Yes
937	Rerailing	Rerailing	86.403	76.036	Yes
947	Rerailing	Maitland to Minimbah Stage 2	405.920	356.741	Yes
948	Rerailing	Maitland to Minimbah Stage 2	991.692	754.190	Yes
951	Rerailing	Rerailing	93.389	83.901	Yes
955	Rerailing	Rerailing	440.012	393.830	Yes
956	Rerailing	Rerailing	47.396	41.039	Yes
957	Rerailing	Rerailing	203.224	177.088	Yes
973	Rerailing	Rerailing	136.977	121.780	Yes
963	Rerailing	Rerailing	168.853	168.853	No
964	Rerailing	Rerailing	7026.026	7026.026	No
965	Rerailing	Rerailing	0.000	0.000	No
		<b>TOTAL NETWORK</b>	<b>9,776.187</b>	<b>9,345.385</b>	
		<b>TOTAL CONSTRAINED</b>	<b>2,581.308</b>	<b>2,150.505</b>	

## APPENDIX D - 1 January to 31 December 2012 RAB Floor Limit roll forward Summary

RAB Floor Limit roll forward			
1 January 2012 - 31 December 2012			
		Total	Constrained
CPI		2.302%	2.302%
Depreciation at 1 July 2011		4.7619%	4.7619%
Depreciation at 1 October 2011		4.8193%	4.8193%
Depreciation 2012		2.5000%	2.5000%
<b>Opening Total RAB Floor Limit (1/01/2012)</b>		<b>1,073,587,301</b>	<b>882,161,764</b>
<b>Existing assets as at 1 July 2011</b>			
<b>Gross assets:</b>			
Opening Balance		1,036,385,052	860,548,612
<b>Additions / Deletions - Line Segments</b>		0	0
CPI		23,860,717	19,812,431
Original Balance plus CPI		1,060,245,769	880,361,043
Less Disposals		-9,345,385	-2,150,505
<b>Adjusted Net Balance</b>		<b>1,050,900,384</b>	<b>878,210,537</b>
<b>Depreciation:</b>			
% of year		100.0%	100.0%
Depreciation CY		-50,042,875	-41,819,549
CPI on Depreciation PY		-568,112	0
Less Disposal Acc Deprn		0	0
<b>Accumulated Depreciation</b>		<b>-75,286,822</b>	<b>-62,308,802</b>
<b>Closing Balance</b>		<b>975,613,562</b>	<b>815,901,735</b>
<b>New assets 1 July 2011 to 31 December 2011</b>			
<b>Gross assets:</b>			
Opening Balance		62,623,603	42,609,663
<b>Additions / Deletions - Line Segments</b>		0	0
CPI		1,441,785	981,003
Original Balance plus CPI		64,065,388	43,590,666
Less Disposals		0	0
<b>Adjusted Net Balance</b>		<b>64,065,388</b>	<b>43,590,666</b>
<b>Depreciation:</b>			
% of year		100.0%	100.0%
Depreciation CY		-3,087,489	-2,100,755
CPI on Depreciation PY		-17,164	-11,679
Less Disposal Acc Deprn		0	0
<b>Accumulated Depreciation</b>		<b>-3,850,172</b>	<b>-2,619,691</b>
<b>Closing Balance</b>		<b>60,215,216</b>	<b>40,970,974</b>
<b>New assets 1 January 2012 to 31 December 2012</b>			
<b>Gross assets:</b>			
Opening Balance		536,529,398	433,091,441
<b>Additions / Deletions - Line Segments</b>		0	0
CPI		0	0
Original Balance plus CPI		536,529,398	433,091,441
Less Disposals		0	0
<b>Adjusted Net Balance</b>		<b>536,529,398</b>	<b>433,091,441</b>
Less Loss on Capitalisation not depreciated		0	0
<b>Depreciation:</b>			
% of year		50.0%	50.0%
Depreciation CY		-6,706,617	-5,413,643
CPI on Depreciation PY		0	0
Less Disposal Acc Deprn		0	0
<b>Accumulated Depreciation</b>		<b>-13,413,235</b>	<b>-10,827,286</b>
<b>Closing Balance</b>		<b>523,116,163</b>	<b>422,264,155</b>
<b>Total Closing RAB Floor Limit</b>		<b>1,558,944,941</b>	<b>1,279,136,864</b>
<b>Average RAB Floor Limit</b>		<b>1,316,266,121</b>	<b>1,080,649,314</b>

# APPENDIX E - 1 January to 31 December 2012 RAB FLOOR LIMIT VALUES BY SEGMENT & RAB VALUES BY SEGMENT

2012 RAB FL VALUES BY SEGMENT							
DORC Segment Code	Schedule E Code	Description	Constrained 1 January to 31 December 2012	CLOSING H2 2011 RAB FL Value (\$)	OPENING Jan 2012 RAB FL Value (\$)	CLOSING Jan to Dec 2012 RAB FL Value (\$)	Average Jan to Dec 2012 Closing RAB FL Value (\$)
974	974	Wilpinjong To Ulan Colliery Jct	Yes	13,217,941	13,217,941	12,862,636	13,040,289
973	973	Sandy Hollow Jct To Wilpinjong	Yes	137,363,868	137,363,868	134,464,575	135,914,221
972	972	Anvill Hill To Sandy Hollow Jct	Yes	39,407,041	39,407,041	38,841,728	39,124,384
971	971	Bengalla Jct To Anvill Hill	Yes	19,809,126	19,809,126	19,276,646	19,542,886
0	0	Spare	No	0	0	0	0
970	970	Muswellbrook To Bengalla Jct	Yes	25,320,902	25,320,902	24,644,936	24,982,919
961	961	Draytons Jct To Muswellbrook	Yes	100,380,269	100,380,269	97,681,949	99,031,109
958	958	Newdell Jct To Draytons Jct	Yes	28,524,231	28,524,231	27,757,485	28,140,858
957	957	Glennies Creek To Newdell Jct	Yes	12,562,560	12,562,560	12,488,035	12,525,298
956	956	Camberwell Jct To Glennies Creek	Yes	10,684,164	10,684,164	47,463,070	29,073,617
955	955	Whittingham To Camberwell Jct	Yes	29,113,924	29,113,924	67,245,358	48,179,641
948	948	Branxton To Whittingham	Yes	100,378,476	100,378,476	251,778,676	176,078,576
947	947	Farley To Branxton	Yes	165,841,602	165,841,602	344,874,231	255,357,916
946	946	Maitland To Farley	Yes	15,310,902	15,310,902	15,375,675	15,343,289
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	32,509,076	32,509,076	33,779,810	33,144,443
936	936	Sandgate To Thornton (Via Coal)	Yes	97,965,973	97,965,973	95,759,687	96,862,830
926	926	Hanbury Jct To Sandgate (Via Coal)	Yes	2,667,140	2,667,140	2,595,446	2,631,293
925	925	Waratah To Hanbury Jct (Via Coal)	Yes	3,955,815	3,955,815	4,013,313	3,984,564
917	917	Scholey St Jct To Waratah (Via Coal)	Yes	2,977,652	2,977,652	3,153,183	3,065,417
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	1,658,615	1,658,615	1,627,952	1,643,283
916	916	Scholey St Jct To Port Waratah	Yes	10,947,914	10,947,914	10,802,173	10,875,044
0	0	Spare	No	0	0	0	0
931	931	Kooragang East Jct To Sandgate	Yes	795,900	795,900	941,826	868,863
927	927	Hanbury Jct To Kooragang East Jct	No	1,653,133	1,653,133	1,608,696	1,630,915
929	929	Kooragang East Jct To NCIG	Yes	1,586,865	1,586,865	1,544,209	1,565,537
930	930	NCIG To Kooragang Island	Yes	18,941,398	18,941,398	18,505,804	18,723,601
0	0	Spare	No	0	0	0	0
951	951	Whittingham To Saxonvale Jct	Yes	5,713,988	5,713,988	5,750,926	5,732,457
952	952	Saxonvale Jct To Mount Thorley	Yes	2,177,289	2,177,289	2,109,662	2,143,476
959	959	Newdell Branch	Yes	4,007,750	4,007,750	4,954,104	4,480,927
944	944	Telarah To Farley	No	1,117,572	1,117,572	1,087,531	1,102,551
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	4,874,517	4,874,517	6,552,707	5,713,612
964	401	Murulla To Werris Creek	No	98,947,072	98,947,072	167,504,997	133,226,034
963	401	Dartbrook Jct To Murulla	No	58,852,412	58,852,412	78,229,373	68,540,892
962	962	Muswellbrook To Dartbrook Jct	No	24,322,217	24,322,217	23,668,545	23,995,381
<b>Constrained</b>				<b>882,161,764</b>	<b>882,161,764</b>	<b>1,278,665,140</b>	<b>1,080,413,452</b>
<b>Network</b>				<b>1,073,587,301</b>	<b>1,073,587,301</b>	<b>1,558,944,941</b>	<b>1,316,266,121</b>
2012 RAB VALUES BY SEGMENT							
DORC Segment Code	Schedule E Code	Description	Constrained 1 January to 31 December 2012	CLOSING H2 2011 RAB Value (\$)	OPENING Jan 2012 RAB Value (\$)	CLOSING Jan to Dec 2012 RAB Value (\$)	Average Jan to Dec 2012 Closing RAB Value (\$)
965	965	Werris Creek To The Gap	No	5,080,942	5,080,942	6,852,363	5,966,652
964	401	Murulla To Werris Creek	No	101,678,277	101,678,277	173,692,187	137,685,232
963	401	Dartbrook Jct To Murulla	No	60,463,252	60,463,252	79,793,191	70,128,221
962	962	Muswellbrook To Dartbrook Jct	No	24,991,714	24,991,714	26,071,249	25,531,481
<b>RAB Total</b>				<b>192,214,184</b>	<b>192,214,184</b>	<b>286,408,990</b>	<b>239,311,587</b>

# APPENDIX F - Interest During Construction - 1 January to 31 December 2012

Calculation of Interest During Construction						
Rate of Return - IPART	10.92%					
Rate of Return - HVAU	11.83%					
Maitland to Minimbah Third Road - Stage 2	2007/08	2008/09	2009/10	2010/11	2011 H2	2012
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Capital Spend (\$'000)</b>			21,096	62,874	67,042	153,367
Year 1	0	0	0	0	0	0
Year 2		0	0	0	0	0
Year 3			2,304	2,304	1,248	1,248
Year 4				6,866	3,719	3,719
Year 5					3,966	3,966
Previous Years Interest Capitalisation		0	0	252	1,211	1,134
<b>Total Capitalised Interest</b>	<b>0</b>	<b>0</b>	<b>2,304</b>	<b>9,421</b>	<b>10,143</b>	<b>18,440</b>
Commissioning Month/Year	Nov-12					
Proportion of final year for IDC (to 31 December)	0.50					
<b>Interest During Construction</b>	<b>40,307,606</b>					
Line Segment	947	52.18%	21,033,953			
	948	47.82%	19,273,653			
			<b>40,307,606</b>			
Calculation of Interest During Construction						
Rate of Return - IPART	10.92%					
Rate of Return - HVAU	11.83%					
Nundah - Third Track	2010/11	2011 H2	2012			
	Year 1	Year 2	Year 3			
2008/09 expenses not included. Already claimed in previous submissions						
<b>Capital Spend (\$'000)</b>	<b>6,430</b>	<b>11,671</b>	<b>51,965</b>			
Year 1	702	380	380			
Year 2		690	690			
Year 3			3,074			
Previous Years Interest Capitalisation		42	84			
<b>Total Capitalised Interest</b>	<b>702</b>	<b>1,112</b>	<b>4,229</b>			
Commissioning Month/Year	Nov-12					
Proportion of final year for IDC (to 31 December)	0.50					
<b>Interest During Construction</b>	<b>6,042,917</b>					
Line Segment	955	47.56%	2,874,139			
	956	52.44%	3,168,778			
			<b>6,042,917</b>			
Calculation of Interest During Construction						
Rate of Return - IPART	10.92%					
Rate of Return - HVAU	11.83%					
Bells Gate Passing Loop	2010/11	2011 H2	2012			
	Year 1	Year 2	Year 3			
<b>Capital Spend (\$'000)</b>	<b>4,109</b>	<b>11,597</b>	<b>4,785</b>			
Year 1	449	243	243			
Year 2		686	686			
Year 3			283			
Previous Years Interest Capitalisation		27	68			
<b>Total Capitalised Interest</b>	<b>449</b>	<b>956</b>	<b>1,280</b>			
Commissioning Month/Year	Feb-12					
Proportion of final year for IDC (to 31 December)	0.50					
<b>Interest During Construction</b>	<b>2,684,609</b>					
Line Segment	964					
Calculation of Interest During Construction						
Rate of Return - IPART	10.92%					
Rate of Return - HVAU	11.83%					
Pages River Passing Loop	2010/11	2011 H2	2012			
	Year 1	Year 2	Year 3			
<b>Capital Spend (\$'000)</b>	<b>1,679</b>	<b>1,892</b>	<b>18,453</b>			
Year 1	183	99	99			
Year 2		112	112			
Year 3			1,091			
Previous Years Interest Capitalisation		11	18			
<b>Total Capitalised Interest</b>	<b>183</b>	<b>222</b>	<b>1,321</b>			
Commissioning Month/Year	Jul-12					
Proportion of final year for IDC (to 31 December)	0.50					
<b>Interest During Construction</b>	<b>1,726,040</b>					
Line Segment	964					
Calculation of Interest During Construction						
Rate of Return - IPART	10.92%					
Rate of Return - HVAU	11.83%					
Chilcotts Creek Passing Loop	2010/11	2011 H2	2012			
	Year 1	Year 2	Year 3			
<b>Capital Spend (\$'000)</b>	<b>577</b>	<b>1,105</b>	<b>24,329</b>			
Year 1	63.0	34	34			
Year 2		65	65			
Year 3			1,439			
Previous Years Interest Capitalisation		3.7	7.8			
<b>Total Capitalised Interest</b>	<b>63.0</b>	<b>103.2</b>	<b>1,546.3</b>			
Commissioning Month/Year	Dec-12					
Proportion of final year for IDC (to 31 December)	0.50					
<b>Interest During Construction</b>	<b>1,712,605</b>					
Line Segment	964					

## APPENDIX G - Stakeholder Listing

Deleted for privacy reasons.