RSM Bird Cameron

Aurizon Network 2013 Draft Access Undertaking
Financial Assessment of Operating Expenditure

January 2014

RSM Bird Cameron

Table of Contents

1.	Disclaimer and Scope	2
2.	Executive Summary	3
3.	Task 3.2.1 – Review of Corporate Overhead Cost Allocation Methodology	43
4.	Task 3.2.1b – Review of Corporate Overhead Cost Allocation – Maintenance Costs	62
5.	Task 3.2.2 – Benchmarking of Cost of Insurance Premiums	70
6.	Task 3.2.3 – Review of Calculation of Mine Depreciation Profile	75
7.	Task 3.2.4 – Benchmarking of Forecast Compliance Audit Costs	86
8.	Task 3.2.5 – High Level Review of Forecast Operating Expenditure	90
9.	Task 3.2.6 – Total Cost Benchmarking	122
10.	Task 3.2.7 – Detailed Review of Forecast Operating Expenditure	129
11.	Task 3.3.1 – Advice on Interest During Construction ("IDC")	142
12.	Task 3.3.2 – Review of Capital Cost Build-Up	147
13.	Maintenance Submission - Return on Assets	153
14.	Maintenance Submission - Return on Inventory and Working Capital	162
Appendix 1 – Terms of Reference		166
Appendix 2 – Sources of Information		171
Appendix 3 – Glossary of Terms and Abbreviations		173
Appendix 4 – Regulatory Cost Allocation Precedents		175
Appendix 5 – Ernst & Young – Corporate Cost Benchmarking – Process Overview		177

1. Disclaimer and Scope

Disclaimers

1.1 This report has been prepared for the Queensland Competition Authority ("QCA" or "the Authority") solely for the purpose of assisting the Authority in its assessment of specific aspects of Aurizon Network Pty Ltd's ("Aurizon Network") forecast operating and capital expenditure for the UT4 regulatory period and is not to be used for any other purpose without our written consent nor should any other party seek to rely on the opinions, advices of other information contained within this report without prior written consent.

1.2 We disclaim all liability to any party other than QCA in respect of or in consequence of anything done, or omitted to be done, by any party in reliance, whether whole or partial, upon any information contained in this report. Any party, other than QCA, who chooses to rely, in any way, on the contents of this report, does so at their own risk.

1.3 The information in this report and in any related oral presentation made by us is confidential between us and the QCA, and should not be disclosed in whole or in part for any purpose except with our prior written consent.

Authorisations

1.4 Other than for the purpose outlined above, this report should not be released to any other third party without the prior written consent of RSM Bird Cameron.

Scope

1.5 We have performed the procedures outlined in the Authority Terms of Reference "Aurizon Network 2013 Draft Access Undertaking Financial Assessment of Operating Expenditure" dated 13 August 2013 (Appendix 1).

1.6 We have also undertaken additional procedures as agreed with QCA in relation to the following:

- a review of the corporate overheads allocated to maintenance costs as included in Aurizon Network's UT4 maintenance submission;
- a review of the return on maintenance assets, working capital and inventory allowance included in Aurizon Network's UT4 maintenance submission; and
- consideration and responses to relevant submissions from QRC, Asciano, BMA and BMC and RTCA.

Findings

1.7 With respect to the above, we have set out details of our findings on pages 43 to 165 of this report. An executive summary, highlighting our key findings and recommendations is set out on pages 3 to 42 of this report.

2. Executive Summary

2.1 The table below summarises the key findings from our review. Further details in relation to the key findings can be found in the relevant section of the report.

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	Aurizon Network has proposed a new methodology in relation to corporate overhead costs to apply in the UT4 period. Aurizon Network has undertaken the following steps to assess corporate overheads for 2013/14: ▪ identified all Aurizon Holdings' corporate overhead costs/categories; ▪ allocated Aurizon Holdings' corporate overheads to the regulated below rail network business; and ▪ engaged Ernst & Young to benchmark the overheads allocated to Aurizon Network against a number of different organisations to assess the comparability of the proposed Aurizon Network corporate costs relative to these benchmarks. Aurizon Network has, in summary: ▪ determined 226 overhead cost centres within Aurizon Holdings which require cost allocations to below rail activities; o determined 5 different cost driver allocation methodologies to allocate a proportion of corporate overhead costs to Aurizon Network based on the following: ▪ the number of network FTEs (excluding specialised track services and asset maintenance) plus an allocation of corporate resources from the Finance, Business Sustainability, Enterprise Services and Human Resources areas as a proportion of total FTEs; ▪ network operations revenue (adjusted to subtract revenue associated with maintenance) as a proportion of total Aurizon Holdings' revenue; ▪ direct costs (excluding inter-companies and depreciation, but including capitalised costs) of Aurizon Network's business (not including specialised track services and asset maintenance) as a proportion of total Aurizon Holdings direct costs (as defined above);

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr>
<td>Task 3.2.1 – Review of corporate overhead allocation methodology (continued)</td>
<td>RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking.

The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs.

RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.</td>
<td>Section 3

Pages 43 to 61</td>
<td>

a blended allocator based on the average of:

the number of network FTEs (excluding specialised track services & asset maintenance) plus an allocation of corporate resources from the Finance, Business Sustainability, Enterprise Services and Human Resources areas as a proportion of total FTEs;
network operations revenue (adjusted to subtract revenue associated with maintenance) as a proportion of total Aurizon Holdings' revenue; and
the carrying value of the Aurizon Network's regulated Property, Plant & Equipment assets as a proportion of Aurizon Holdings' total Property, Plant & Equipment assets (as at 30 June 2012); and

a 100% allocation for overhead costs that can be 100% attributed to Aurizon Network operations.

The cost allocations applied to the 2012-13 forecast costs are as set out below.
<table>
<tr><th>Cost Driver</th><th>Cost Allocation ($)</th><th># of Cost Centres</th></tr>
<tr><td>Network FTE</td><td>2,326,613</td><td>61</td></tr>
<tr><td>Network revenue</td><td>2,197,261</td><td>4</td></tr>
<tr><td>Network direct costs</td><td>3,103,746</td><td>8</td></tr>
<tr><td>Blended rate</td><td>41,565,558</td><td>141</td></tr>
<tr><td>100% allocation</td><td>14,276,782</td><td>12</td></tr>
<tr><td>Total</td><td>63,469,960</td><td>226</td></tr>
</table>
Aurizon cost centre determination
The cost centre determination was based on the internal financial reporting structure utilised by Aurizon Holdings in developing its 2013 updated corporate plan.
Aurizon Holdings is currently undergoing a process to consolidate a number of its cost centres.
We recommend that the QCA considers the implications of the cost centre consolidation on any regulatory reporting regime that Aurizon Network is required to abide by to ensure that future reporting of Aurizon Network standalone costs is consistent with the methodologies applied in setting the UT4 costs.
</td>
</tr>
</table>

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology (continued)	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	**Classification of cost centres** RSMBC has undertaken a detailed review of the classification of cost centres between shared costs, costs 100% allocated to below rail activities and costs 100% allocated to above rail activities. RSMBC noted, by exception, the following issues from the above review: ▪ costs of $868,237 included in shared activities that related solely to above-rail activities (train simulator costs and Townsville property depreciation); and ▪ costs of $168,269 included in below rail activities that did not relate to Network activities and, in our opinion, should not be allocated (property disposal costs – vacant land and surplus housing). **Allocation of costs with no causal allocator** The majority of the allocated cost relates to cost centres where no clear causal cost driver could be determined. Aurizon Network has utilised a blended allocator rate after undertaking an analysis of other regulated businesses in Australia and cost allocation methodologies applied. Aurizon Network states on page 230 of Volume 3 of the 2013 Draft Access Undertaking that Energex was identified as a comparable business and its blended rate components were adopted for Aurizon Network. The blended allocator used was based on three cost drivers being asset value, revenue and FTE's. Aurizon Network states in Volume 3 of the 2013 Draft Access Undertaking that: ▪ asset values were considered an acceptable component of the blended allocator as Aurizon Network is an asset intensive business, similar to Energex (and most other regulated infrastructure providers); ▪ revenue was considered an acceptable component of the blended rate as regulatory precedent shows that it is commonly used by other entities using blended rates such as Energex and Powercor/Citipower; and ▪ FTEs were considered an acceptable component of the blended rate and are commonly used as a causal allocator. Regulatory precedent also supports the use of FTEs as a component in a blended allocator. A summary of regulatory precedents was also provided by Ernst & Young as part of the benchmarking exercise that was undertaken. A copy of these precedents as referred to in Ernst & Young's benchmarking exercise is set out in Appendix 4. The selection of a cost allocation methodology to allocate costs where there is insufficient information to allocate based on the causal cost drivers, using an activity based costing methodology, is highly subjective. The allocation methodology requires some judgement. The allocation methodology adopted by Aurizon Network, along with other methodologies, has been previously accepted by regulators.

RSM Bird Cameron

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology (continued)	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	We have reviewed the position presented by Aurizon Network and have also reviewed the publicly available information in relation to the regulatory precedents, and comment as follows: ▪ Energex has allocated the above indirect costs between its regulated activities (after initially allocating costs to non-regulated services) based on the proportion of direct costs within each business expressed as a percentage of total direct costs. "Energex has determined that overheads will be allocated to services on the basis of total direct spend as this reflects a strong correlation with the consumption of the indirect overhead."[1] Based on Energex's financial statements for the year ended 30 June 2013, regulated services revenue comprised 93.0% ($1.90 billion) of total revenue from the provision of services and goods ($2.13 billion). The blended allocation methodology referred to by Aurizon Network was applied to the non-regulated services of Energex which represents a small proportion of the Energex's business. ▪ Ernst & Young's Summary of Precedents (Appendix 4) indicates that the most commonly used cost allocation method is the direct cost methodology. The direct cost methodology has been applied by: o Energex (as discussed above); o Aurora Energy (for a large number of its cost centres); o Jemena; o Victorian Rail Track Corporation; and o Dalrymple Bay Coal Terminal ("DBCT") ▪ A blended allocator, as proposed by Aurizon Network has been utilised by: o Energex – for a relatively small proportion of its business; and o CitiPower & Powercor in allocating shared costs;

[1] Energex cost allocation methodology – February 2009 – page 21

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology (continued)	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	▪ we consider that there is generally a stronger correlation between an entity's direct costs and its corporate overhead costs than the value of an entity's assets and its corporate overhead costs. However, based on Ernst & Young's benchmarking report, we note that there is some regulatory precedent for the use of asset values in a regulatory cost allocation process. We further note that circa 59% of Aurizon Network's direct costs relate to energy costs, which may reduce the correlation between direct costs and corporate overhead costs; ▪ we consider the use of direct costs instead of revenue may be more appropriate as part of any blended allocation rate adopted. A large proportion of Aurizon Network's revenue relates to the return on and the return of capital in relation to the value of the RAB. The utilisation of revenue would therefore appear to include reference to the value of Aurizon Network's assets twice; and ▪ we note that the application of the direct cost methodology would result in an allocation of information technology costs at a level below the cost of the telecommunications backbone (these costs were previously recognised within direct business costs in UT3). Therefore, we consider that, if this methodology was adopted, the telecommunication backbone costs of circa $9.3 million should be allocated 100% to Aurizon Network prior to the utilisation of the blended cost allocator. **Application and calculation of other cost allocation drivers** We have reviewed the application and calculation of the other cost allocation drivers. In calculating the cost allocation percentage for direct costs (applied to accounts payable and procurement), Aurizon Network has included capital expenditure. Aurizon Network includes a corporate service charge in its capital expenditure - labour and contractor costs - to capitalise corporate costs associated with capital expenditure. We, therefore, do not consider it appropriate to include capital expenditure in the allocation of corporate costs to the below rail operations. In addition, Aurizon Network proposes to apply the blended allocator to costs in relation to worker's compensation insurance. These costs were estimated at $[redacted] for 2012/13 as the basis of allocation of costs to Aurizon Network. Under the blended rate allocation methodology, 24.55% of these costs are allocated to below rail operations. We consider that it would be reasonable to utilise FTE numbers as the basis of allocating worker's compensation insurance costs as, in our opinion, there is a strong causal relationship between FTE numbers and these costs, resulting in an allocation of 15.43% of these costs to below rail operations. Other than the issues noted above, the application and calculation of other cost allocation drivers did not appear unreasonable.

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology (continued)	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	**Review of Ernst & Young Benchmarking Report** Aurizon Network commissioned Ernst & Young to undertake a benchmarking exercise to assess the reasonableness of Aurizon Network's proposed corporate costs. There are a number of issues identified by RSMBC in relation to the Ernst & Young benchmarking report summarised as follows: ▪ the sole normalisation factor that Ernst & Young has utilised to account for differences in the size and nature of the comparable companies is revenue. This assumes that corporate overheads are fully variable and may result in an overstatement of benchmark costs when utilising benchmark companies with lower revenue; ▪ Ernst & Young has benchmarked Aurizon Network as a 'stand-alone' entity. This methodology ignores the fact that Aurizon Network is part of a larger group with centralised functional overheads. This centralised functional overhead structure has been adopted by Aurizon Holdings to derive cost savings; ▪ Ernst & Young has defined company 1 in the benchmarking study as a large State-owned Asia-Pacific Rail company operating network, yards and facilities, freight, passenger, rolling stock and engineering services. The operations of this entity, which include network operation, are more expansive than Aurizon Network and include the complexities of operating a passenger network; ▪ Ernst & Young has utilised data from the distribution/transport industry and cross industry data sets of APQC. The report does not present any analysis in relation to the activities of the entities which comprise this data set to ensure that the data sets are relevant as a benchmark to Aurizon Network. The relevancy of this benchmark data cannot, therefore, be ascertained; ▪ there are a number of costs presented in relation to the comparable rail companies that are well above those of Aurizon Network, the other comparable rail company, or the cumulative industry costs. The Ernst & Young report contains no analysis as to the underlying reasons of these anomalous costs and the implications for the benchmarking exercise, in particular when comparing total corporate costs against Aurizon Network; and ▪ Ernst & Young has not been able to benchmark costs of $4,117,000 (representing 6.49% of total costs) that are proposed to be allocated.

RSM Bird Cameron

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology (continued)	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	**Conclusion** Based on the issues identified above in relation to the Ernst & Young benchmarking exercise, we consider that the benchmark costs utilised to support Aurizon Network's proposed corporate cost allocation are likely overstated, primarily due to: ▪ the costs being normalised solely based on revenue; ▪ no allowance being made in the benchmarking for the synergistic benefits that Aurizon Network should benefit from as a result of forming part of a larger group with centralised overhead functions; and ▪ no allowance or explanation being made for outlying costs when assessing costs in total. We agree with Aurizon Network's assertion that corporate overheads utilised in UT3 period were below the actual costs incurred by Aurizon Holdings in relation to management of Aurizon Network. However, based on the preceding analysis, we consider the use of an alternative cost allocation methodology (direct costs as a percentage of total direct costs) to allocate overheads for cost centres, where no clear cost driver can be determined, may be appropriate on the basis that: ▪ this is the most commonly adopted methodology in the regulatory environment; ▪ it is the primary methodology adopted by Energex, the company that Aurizon Network has identified as a comparable business. We note that circa 59% of Aurizon Network's direct costs relate to energy costs which may reduce the appropriateness of the direct cost methodology. However, we still consider that this methodology should be considered. Utilising this methodology, and having regard for other matters identified in this section of our report, the corporate overheads to be allocated over the UT4 period would be as follows.

FY14 ($'m)	FY15 ($'m)	FY16 ($'m)	FY17 ($'m)
48.00	49.80	51.61	53.37

(in nominal dollars)

Section	Scope	Reference	Key findings
Task 3.2.1 – Review of corporate overhead allocation methodology (continued)	RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking. The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs. RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.	Section 3 Pages 43 to 61	Should a blended rate methodology be adopted for allocating overheads for cost centres where no clear cost driver can be determined, we consider that it may be more appropriate to utilise direct costs rather than revenue as a component of that blended rate on the basis that: ▪ direct costs as a percentage of total direct costs is one of the most commonly adopted allocation methodologies in the regulatory environment; and ▪ a large proportion of Aurizon Network's revenue relates to the return on and the return of capital in relation to the value of the RAB. The utilisation of revenue would therefore appear to include reference to the value of Aurizon Network's assets twice. Utilising this methodology, and having regard for other matters identified in the section of our report, the corporate overheads to be allocated over the UT4 period would be as follows: FY14 ($'m): 58.00 · FY15 ($'m): 60.32 · FY16 ($'m): 62.65 · FY17 ($'m): 64.91 *(in nominal dollars)* Utilising Aurizon Network's proposed methodology, and having regard for other matters identified in the section of our report, the corporate overheads to be allocated over the UT4 period would be as follows: FY14 ($'m): 64.11 · FY15 ($'m): 66.67 · FY16 ($'m): 69.24 · FY17 ($'m): 71.74 *(in nominal dollars)* RSMBC has benchmarked the revised UT4 2013/14 total operating expenses under the direct cost allocation methodology in section 10 of this report.

Section	Scope	Reference	Key findings
Task 3.2.1b – Review of corporate overhead cost allocation – maintenance costs	RSMBC has been requested by QCA to review the corporate overhead costs proposed by Aurizon Network in the UT4 maintenance submission. The review includes undertaking an assessment of the estimate of Aurizon Network's maintenance services overheads report prepared by Deloitte Access Economics.	Section 4 Pages 62 to 69	In its UT4 maintenance submission, Aurizon Network has included an amount (in real terms for the year ended 30 June 2012) of $12.09 million per annum in relation to corporate overhead and corporate services. The corporate cost figure of $12.09 million has been calculated using a combination of two pieces of work undertaken by Deloitte. Firstly a bottom-up cost build-up based on a hypothetical maintenance business delivering maintenance services of approximately $200 million and secondly a benchmarking exercise centred on regulated businesses. The maintenance corporate costs have been isolated, and independently calculated from the remaining UT4 submission. The Deloitte bottom up analysis estimated the following corporate overhead costs for Aurizon Network.

Bottom-up maintenance corporate overheads	Total Overhead Cost $' m
Office of the CEO and Board	2.01
Legal services	0.76
Finance services	1.88
Human resources	0.76
Business strategy and planning	0.60
Information systems	4.00
Corporate services	1.00
Office overheads	1.08
	12.09

Source: Deloitte Access Economics - Estimate of QR Network Maintenance Services Overheads, 1 November 2012
Costs expressed in 30 June 2012 real dollars

RSMBC has undertaken a review of the report prepared by Deloitte to assess the reasonableness of the proposed costs.

RSMBC considers that the allocated costs are not unreasonable, with the exception of:

CEO and Board costs

CEO and Board costs have been estimated based the average salary for CEO's for mining service companies with revenues under $1 billion, the average number of board members and average salary for mining services companies of a similar size (5 x $117,000) and associated administrative, consultancy and travel costs.

Given the size of Aurizon Network's maintenance operations, we consider that the use of mining services companies with revenues under $1 billion may not be appropriate.

RSM Bird Cameron

Section	Scope	Reference	Key findings
Task 3.2.1b – Review of corporate overhead cost allocation – maintenance costs (continued)	RSMBC has been requested by QCA to review the corporate overhead costs proposed by Aurizon Network in the UT4 maintenance submission. The review includes undertaking an assessment of the estimate of Aurizon Network's maintenance services overheads report prepared by Deloitte Access Economics.	Section 4 Pages 62 to 69	The average total CEO remuneration for the 2012 financial year for ASX listed companies with revenues of between $151 million and $450 million, was $698,000.[2] The average total non-executive director remuneration for the 2012 financial year for ASX listed companies with revenues of between $150 million and $251 million, was $73,000.[2] Furthermore, we consider that there are significant savings that can be derived from Aurizon Network forming part of a larger group. Aurizon Holdings total annual costs for the office of the CEO and Board used to allocate costs used to allocate corporate cost to Aurizon Network amounted to circa $[redacted]million. The proposed maintenance overhead proportion of total costs therefore amounts to[redacted]% of the total costs. This proportion appears high. As a proportion of the total direct costs of Aurizon Holdings, actual maintenance costs for the year ended 30 June 2013 of $153 million represents[redacted]% of Aurizon Holding's total costs. Therefore, if CEO and Board costs were allocated on the basis of direct costs, the amount allocated to maintenance corporate costs would amount to circa $630,000. We consider that this would be a more reasonable estimate of CEO and Board costs to be applied to maintenance overheads. **Legal services costs** Proposed legal services costs include $660,000 in relation to 5 legal staff with average salary of $131,000 per employee based on salary benchmarking. In allocating Aurizon Holdings' corporate overheads to Aurizon Networks below rail activities, 100% of the costs relating to Aurizon Network's legal counsel division of circa $[redacted]million have been allocated to Aurizon Network. From the information provided to date, it is not clear as to why a further cost of $660,000 in relation to 5 legal staff is required in relation to maintenance activities.

[2] Source: Thomson Reuters 2013 Boardroom Remuneration Review

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr>
<td>Task 3.2.1b – Review of corporate overhead cost allocation – maintenance costs (continued)</td>
<td>RSMBC has been requested by QCA to review the corporate overhead costs proposed by Aurizon Network in the UT4 maintenance submission.

The review includes undertaking an assessment of the estimate of Aurizon Network's maintenance services overheads report prepared by Deloitte Access Economics.</td>
<td>Section 4

Pages 62 to 69</td>
<td>On the basis of the analysis of the bottom up approach, we consider that a reasonable corporate cost allocation to maintenance is as set out below.

<table>
<tr><th>Bottom-up maintenance corporate overheads</th><th>Proposed Overhead Cost $' m</th><th>Revised Overhead Cost $' m</th></tr>
<tr><td>Office of the CEO and Board</td><td>2.01</td><td>0.63</td></tr>
<tr><td>Legal services</td><td>0.76</td><td>0.10</td></tr>
<tr><td>Finance services</td><td>1.88</td><td>1.88</td></tr>
<tr><td>Human resources</td><td>0.76</td><td>0.76</td></tr>
<tr><td>Business strategy and planning</td><td>0.60</td><td>0.60</td></tr>
<tr><td>Information systems</td><td>4.00</td><td>4.00</td></tr>
<tr><td>Corporate services</td><td>1.00</td><td>1.00</td></tr>
<tr><td>Office overheads</td><td>1.08</td><td>1.08</td></tr>
<tr><td></td><td>12.09</td><td>10.05</td></tr>
</table>
(Costs expressed in 30 June 2012 real dollars)

Benchmarking comparison undertaken by Deloitte

Deloitte included within its report a benchmarking of the proposed percentage of corporate costs to recent regulatory decisions. The recent regulatory decisions quoted by Deloitte have an average of 7.0% of total cost and a median of 5.4% of total cost. The costs proposed by RSMBC above amount to circa 5.1% of maintenance costs, or 5.5% if $660,000 of legal costs were reallocated from the $[redacted] million of network operation's legal costs included in the allocation to below rail operations.

Prima-facie, the benchmarking might indicate that the proposed costs are too low. However, we consider that the lower percentage of costs is reflective of the fact that Aurizon Network currently operates within a larger group with a centralised overhead function. We further note that the costs proposed would be broadly consistent with those utilised within the UT3 maintenance costs of 5.75% (inclusive of a working capital allowance).

<u>Conclusion</u>

Based on the analysis undertaken, RSMBC recommends that the corporate maintenance costs of $12.09 million per year in real terms proposed by Aurizon, be amended to $10.24 million per year in real terms (for the year ended 30 June 2012).

The proposed reductions are reflective of:

▪ Aurizon Network being part of a larger group with centralised functional overheads that will result in lower corporate overheads than a stand-alone entity; and

▪ corporate overheads (legal costs) allocated within Aurizon Network's proposed operating expenses.</td>
</tr>
</table>

Section	Scope	Reference	Key findings
Task 3.2.2 – Benchmarking of cost of insurance premiums	RSMBC has been requested by QCA to benchmark the insurance costs proposed by Aurizon Network based on a commissioned report from Willis Australia Limited ("Willis") and provide an opinion on the reasonableness of the proposed costs in the context of the assumption that Aurizon Network operates as a stand-alone business.	Section 5 Pages 70 to 74	Aurizon Holdings has a group insurance program that includes a number of different insurance policies, including coverage of the activities of Aurizon Network. Network engaged Willis to provide an assessment of the annual insurance premium costs that would apply to Aurizon Network on a stand-alone basis for the following classes of insurance, specifically in relation to the CCQN. Willis concluded the following insurance costs for 2012/13 would apply to Aurizon Network.

Insurance Risk	Proposed Costs 2012/13 $'000
Industrial special risks	2,276
General liability	633
Directors and officers	291
Professional indemnity	27
Employment practices liability	3
Corporate Travel	3
Total	**3,233**

The above costs have then been adjusted for CPI of 4% per annum and for the movement in rolling stock values based on the estimated capital expenditure provided by Aurizon Network to Willis.

Conclusion

RSMBC has benchmarked the two material insurance costs proposed by Aurizon Network in relation to industrial special risks and general liability. As insurance costs and insurance premium details are not publicly available, to enable benchmarking, RSMBC approached a number of comparable entities (below rail operators) and requested, on a confidential no-names basis, details of each entities insurance policies.

It should be noted that the benchmarking undertaken is limited to the extent that the comparable entities will have different risk profiles based on each entity's size, geography and insurance claims history. Information on these differences is not available to enable further analysis. Therefore, the benchmarking should be considered as indicative only.

RSMBC also obtained details of the group policies Aurizon Holdings holds and compared and assessed the reasonableness of the proposed insurance costs for Aurizon Network to the total insurance costs and insurance coverage of Aurizon Holdings.

Based on the analysis undertaken, the corporate insurance costs proposed by Aurizon Network do not appear unreasonable.

Section	Scope	Reference	Key findings
Task 3.2.3 – Review of Calculation of Mine Depreciation Profile	RSMBC has been requested by QCA to provide an opinion on the proposed change in the calculation of RAB depreciation based on the analysis of CQCN mine lives as discussed in section 6.4 of Volume 3 of the 2013 Draft Access Undertaking.	Section 6 Pages 75 to 85	For the UT4 period, Aurizon Network is proposing a change in the methodology for the calculation of depreciation such that all assets within the RAB are depreciated over a maximum life of 25 years. It is therefore proposed that all assets will be depreciated on a straight line basis over the remaining QCA endorsed physical life of the asset, except where the remaining physical life of the asset exceeds 25 years, in which case the remaining life of the asset is capped at 25 years. Aurizon Network states in its submission that the asset stranding risk is: ▪ asymmetric, that is, regulated businesses do not have upside revenue potential and therefore the risk is unavoidable and cannot be diversified away from the business; and ▪ not compensated in its WACC utilised to calculate the return on capital applied to in the calculation of the MAR. Aurizon Network has based its assessment of the economic life of the CQCN on the weighted average lives of mines serviced by the CQCN. Aurizon Network has: ▪ obtained the marketable reserves of mines within the CQCN as at 1 July 2013 (from Wood Mackenzie); ▪ extrapolated the marketable reserves of each mine over the UT4 period based on Aurizon Network's UT4 volume forecasts; ▪ from 1 July 2017, assumed annual production rates are equivalent to 90% of below rail contracted access rights until depletion of marketable reserves; and ▪ calculated the expected life of each mine based on the above information. Aurizon Network has calculated a weighted average mine based on both: ▪ marketable reserves; and ▪ annual production. Aurizon Network has then used the average of the two weighting methodologies. **Conclusion** RSMBC does not consider it an unreasonable position for Aurizon Network to adopt a depreciation methodology to mitigate the asset stranding risk (subject to this risk not being compensated for within the WACC calculation). RSMBC has undertaken an analysis of the Aurizon Network's basis and calculations for the proposed change in depreciation rates and is of the opinion that the adoption of an amended maximum economic life of assets based on the mid-point of the average mine lives weighted by marketable reserves and production rates does not appear unreasonable.

Section	Scope	Reference	Key findings
Task 3.2.3 – Review of Calculation of Mine Depreciation Profile (continued)	RSMBC has been requested by QCA to provide an opinion on the proposed change in the calculation of RAB depreciation based on the analysis of CQCN mine lives as discussed in section 6.4 of Volume 3 of the 2013 Draft Access Undertaking.	Section 6 Pages 75 to 85	The amended maximum economic life of assets for each economic region is set out below (rounded): ▪ Northern Bowen Basin – 27 years; ▪ Blackwater – 25 years; and ▪ Moura – 27 years. We note that Aurizon Network has proposed a maximum economic life of assets for all regions of 25 years which is inconsistent with the amended maximum economic lives for the Northern Bowen Basin and Moura economic regions, as set out above. Aurizon Network has advised QCA that adjusting the assets lives for regulatory purposes to align them with the average life of the mines will not impact on the tax treatment of the assets, including the rate that they depreciate the assets for tax purposes. RSMBC has reviewed the rationale behind this conclusion and agrees that there would be no impact on the tax treatment of the assets, including the rate at which the assets depreciate.
Task 3.2.4 – Benchmarking of forecast compliance audit costs	RSMBC has been requested by QCA to provide an opinion on the reasonableness of the forecast compliance audit fees included by Aurizon Network in the UT 4 forecast operating expenditure.	Section 7 Pages 86 to 89	Aurizon Network incurs compliance audit costs as a direct consequence of its compliance with the Access Undertaking. As part of the UT3 Undertaking, the QCA was able to request an audit of compliance of any matter under the undertaking provided it has reasonable grounds to do so. Aurizon Network has proposed an amendment for the UT4 period to allow for an annual adjustment to System Allowable Revenue for the difference between actual and forecast compliance audit costs. Aurizon Network has included an estimate in its forecast operating expenditure for compliance audit costs that will be subject to pass-through as set out below. <table><tr><th></th><th>2013 – 14 ($'000)</th><th>2014 – 15 ($'000)</th><th>2015 - 16 ($'000)</th><th>2016 - 17 ($'000)</th></tr><tr><td>Proposed Audit Fees[3]</td><td>254.5</td><td>260.8</td><td>267.4</td><td>274.1</td></tr></table>*(in nominal dollars. Inflated by CPI of 2.5% per annum)* The forecast compliance audit costs are based on costs previously incurred by Aurizon Network in the performance of its previous obligations. Based on a review of Aurizon Network's historical compliance audit costs and benchmarking of the forecast compliance audit costs against other regulated entities' compliance audit costs where compliance audits are conducted on a regular basis, the forecast audit compliance costs proposed by Aurizon Network do not appear unreasonable. We further note that the compliance audit costs are proposed to be part of a cost pass through arrangement such that Aurizon Network will ultimately only recover the actual compliance audit costs incurred.

[3] Source: Table 65 – Section 10.2.3.6 – Volume 3 2013 Draft Access Undertaking

Section	Scope	Reference	Key findings
Task 3.2.5 – High Level Review of Forecast Operating Expenditure (part 1)	RSMBC has been requested by QCA to benchmark Aurizon Network's forecast operating expenditure for the CQCN with relevant industry comparators	Section 8 Pages 90 to 97	The scope of our review was constrained to an examination of those costs that can be directly or indirectly attributed to the provision of the rail services on the CQCN Systems. The costs of infrastructure maintenance and capital expenditure were explicitly excluded from the scope of the benchmarking. In undertaking our benchmarking, we selected ARTC's Hunter Valley Network in NSW and the Brookfield Rail Network in WA to compare key aspects of the cost structure for the CQCN with the cost structure for other similar operations on the basis that these two entities undertake similar activities within Australia and information on operating costs is publicly available for the operation of both networks. It should be noted that no two access providers are the same. Therefore, any benchmarking exercise can only provide an "indicative" comparison. We note that Aurizon Network operates a larger sized network than the ARTC Hunter Valley coal network, its closest comparative in Australia in terms of operational characteristics. The Brookfield Network is smaller than both Aurizon Network and ARTC Hunter Valley and operates as a stand-alone network access provider. The ARTC Hunter Valley Network is part of a larger national network operation with ARTC also operating interstate freight rail networks. The Hunter Valley Network is also managed by the Hunter Valley Coal Chain Coordinator ("HVCCC"), which is responsible for day to day planning and scheduling and long term capacity planning. This contrasts with the CQCN, where Aurizon Network retains full responsibility for these activities and costs. From the publicly available benchmarking information, it is not clear to what extent the costs of the HVCCC are funded by ARTC and reflected in the benchmarking information. We consider that the variables applying to below rail access providers should not vary a great deal based on GTK, if the operations are of similar track length and complexity. We consider that the nature of operating costs within a business such as Aurizon Network would be largely fixed in nature. Any increases in costs would likely be 'step changes' caused by increases in volumes or Network size constraining a function to above its current capacity. Operational differences impacting cost may include: ▪ hours of operations, particularly train control may vary depending upon number of train paths. Whilst all of the companies reviewed are 24/7 operations, the number of panel operators required may be reduced at times; ▪ level of automation may vary; ▪ locations, such as control rooms, if in a remote area may present additional challenges than if located in a less remote area; ▪ complexity of the operations could require more train controllers and more expensive equipment and supporting systems; and ▪ UT4 forecast growth resulting in longer trains could, without corresponding changes in infrastructure, such as increased length of sidings and passing loops, make the operations more complex.

Section	Scope	Reference	Key findings
Task 3.2.5 – High Level Review of Forecast Operating Expenditure (part 1) (continued)	RSMBC has been requested by QCA to benchmark Aurizon Network's forecast operating expenditure for the CQCN with relevant industry comparators	Section 8 Pages 90 to 97	Aurizon Network has identified a number of factors and differences between its operations and that of the comparable entities that also impact on the assessment of the benchmarking results including: ▪ Aurizon Network operates a system with significant route electrification; ▪ Aurizon Network's CQCN system is predominantly in a remote location and in a region which endures more extreme weather conditions compared with the Hunter Valley coal system resulting in higher operational complexity and costs; ▪ Aurizon Network is part of a more complex supply chain structure when contrasted with the Hunter Valley coal system which interfaces with one port precinct which is governed by the HVCCC. The Central Queensland Ports have significant different operating modes which directly affect the capacity and operation of the Central Queensland Coal System. For example the Dalrymple Bay Coal Terminal has a cargo assembly model which places significantly more strain and operational complexity onto the rail and mine components of the supply chain compared with the Hunter Valley; ▪ Interconnectivity of the four systems creates complexity with respect to access rights, cross system tariffs and operations to several terminals both domestic and export; and ▪ the introduction of short term transfers system will also add complexity to train scheduling. As a response to feedback from customers for greater flexibility in the management of access rights, including for the purpose of managing take or pay obligations, Aurizon Network has agreed with the proposal to introduce a process to facilitate short term transfers, by enabling customers within a cluster (or within a short geographical distance of each other) to seek pre-approval of a transfer. For the purpose of the benchmarking, where applicable, comparative figures were adjusted to reflect 2013/2014 dollars. In establishing the indicative "Shadow" benchmark with the assistance rail industry experts engaged by RSMBC as part of our review, we have: ▪ estimated the number of staff and average labour costs required based on functions, as a below rail / infrastructure manager, to manage the CQCN business as a standalone entity together with associated running costs. This is based on the experience the rail industry experts in leadership and executive management roles on railways; and ▪ tested the reasonableness of the above using confidential information with comparable railways to which our rail industry experts have access. Due to the confidential nature of the information utilised, we are unable to disclose the details of these comparable railways. A number of adjustments were applied to the "base" cost model developed in order to reflect the current operational structure of Aurizon Network.

Section	Scope	Reference	Key findings
Task 3.2.5 – High Level Review of Forecast Operating Expenditure (part 1) (continued)	RSMBC has been requested by QCA to benchmark Aurizon Network's forecast operating expenditure for the CQCN with relevant industry comparators	Section 8 Pages 90 to 97	The key adjustments within Operational Costs reflected: ▪ additional staff required due to the largely manual operation and management of yards; ▪ duplication and impact of remoteness of operation of control rooms; and ▪ higher level of activity apparent in HS&E than is assumed as being required for a similar sized operator. We consider that the above matters represent opportunities where future operational expenditure savings could be generated. The indicative Shadow operator comparatives are adjusted to reflect the same track length, UT4 GTK and costs in 2013/2014 dollars. The following table summarises the results of the benchmarking exercise.

	UT4 (2013/14 forecast)	Brookfield Rail (2009 adj)	ARTC Hunter Valley (Avg 2013/14 forecast)	Indicative Shadow
Operating Cost ($ million)	57.58	14.33	29.73	52.83
Track Km (estimated)	2,667[4]	1,997[5]	1,336[6]	2,667
Operating Cost / Track Km	$21,590	$7,176	$22,252	$19,809
Forecast GTK (million)	80,513	23,532	43,309	80,513
Operating Cost / Forecast GTK (cents)	0.072	0.061	0.069	0.066
Contracted GTK (million)	107,138	N/a	43,309[7]	107,138
Operating Cost / Contracted GTK (cents)	0.054	N/a	0.069	0.049

(in 2013/2014 dollars)

[4] Source: Aurizon Network
[5] Source: ARTC Hunter Valley business presentation dated March 2012
[6] Source: Economic regulation Authority, WA, Final Determination on the Proposed 2009-2010 Floor and Ceiling Costs (30 June 2009).
[7] Based on ARTC Explanatory Guide 2010 HVAU -Appendix 7 - ARTC revised Interim Indicative Access Charges we understand that forecast volumes were based on expected contract volumes

Section	Scope	Reference	Key findings
Task 3.2.5 – High Level Review of Forecast Operating Expenditure (part 1) (continued)	RSMBC has been requested by QCA to benchmark Aurizon Network's forecast operating expenditure for the CQCN with relevant industry comparators	Section 8 Pages 90 to 97	**Conclusion** This benchmarking exercise has a number of constraints that need to be recognised. In particular, that quality and level of information for the comparative below rail access providers is limited. The key points noted from our benchmarking of operational expenditure were that the: ▪ comparative cost per operating Track Km and per forecast GTK between ARTC (Hunter Valley) and Aurizon Network are materially consistent; ▪ comparative cost per contracted GTK between ARTC (Hunter Valley) and Aurizon Network is 21.8% lower; ▪ comparative cost per operating Track Km between Brookfield Rail and both ARTC (Hunter Valley) and Aurizon Network is significantly lower; and ▪ comparative cost for our benchmark indicative "Shadow" is 9% lower than Aurizon Network's forecast costs. Based on a desktop benchmarking exercise the ability to drill down further is limited. We consider that, whilst there may be some justifiable reasons for a differential between the "Shadow" benchmark costs and Aurizon Network's proposed operating costs, there may also be potential opportunities for Aurizon Network to reduce operating expenditure, particularly in relation to control room operations and the management of yards. Should QCA consider that further investigation and justification of both the difference between our "Shadow" benchmark costs and the possibility for further operational saving, we recommend that a more detailed review, including site visits, be undertaken. Based on the above benchmarking exercise, the proposed Operational Costs do not appear unreasonable.

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr>
<td>Task 3.2.5 – High Level Review of Forecast Operating Expenditure – Corporate Overhead costs (part 2)</td>
<td>RSMBC has been requested by QCA to compare the forecast operating expenditure to historical operating expenditure at both the regional and system levels.</td>
<td>Section 8

Pages 98 to 108</td>
<td>
As the corporate costs included in the proposed MAR for the UT4 period represent an allocation of Aurizon Holdings' total group corporate costs to Aurizon Network, we have undertaken an analysis of corporate costs at the Aurizon Holdings' total cost level.
In comparing the historical corporate costs of Aurizon Holdings over the UT3 period to those utilised as the basis for forecasting the UT4 corporate costs, Aurizon Holdings' management has also raised the following that has been considered within our analysis:

the corporate costs for FY11 include a number of costs relating the IPO of Aurizon Holdings on the ASX; and
in December 2012, Aurizon Holdings commenced a restructure to consolidate all corporate overhead services into centralised divisions that provide shared services across the Aurizon Holdings group. This has resulted in a number of costs previously recorded within above and below rail business units now being reported within corporate costs.

As we have only been able to analyse corporate costs at the Aurizon Holdings group level, we have not analysed these costs on a system or a $/train path basis. Given the nature of corporate costs we do not consider that this analysis would have had a material impact on our findings.
The table below summarises by function, the actual corporate costs of Aurizon Holdings for the 3 years ended 30 June 2013, the budgeted corporate costs of Aurizon Holdings for FY2013 used as the basis to allocate corporate costs to Aurizon Network in the UT4 submission and Aurizon Holdings' budgeted corporate costs for the year ended 30 June 2014.
<table>
<tr><th>Aurizon Holdings - Corporate Cost Analysis</th><th>Year ended 30 June 2011 Actual $'000</th><th>Year ended 30 June 2012 Actual $'000</th><th>Year ended 30 June 2013 Actual $'000</th><th>UT4 Submission Forecast $'000</th><th>Year ending 30 June 2014 Budget $'000</th></tr>
<tr><td>Descrition</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Finance</td><td>[redacted]</td><td></td><td></td><td></td><td></td></tr>
<tr><td>General Counsel and Company Secretary</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Internal Audit and ERM</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Information Technology</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Human Resources</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Safety Health & Environment</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Enterprise Real Estate</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Enterprise Procurement</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Enterprise Strategy and Branding</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CEO and Board</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Non-benchmarked Functions</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Corporate Strategy</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Unallocated</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Less: One off abnormal costs</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Add: Real estate costs included in 2013 previously reported in business unit divisions</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total adjusted corporate costs</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
Source: Aurizon Holdings Management
In nominal dollars
</td>
</tr>
</table>

Section	Scope	Reference	Key findings
Task 3.2.5 – High Level Review of Forecast Operating Expenditure – Corporate Overhead costs (part 2) (continued)	RSMBC has been requested by QCA to compare the forecast operating expenditure to historical operating expenditure at both the regional and system levels.	Section 8 Pages 98 to 108	Key issues noted from our detailed review of each functional area was: ▪ Finance costs - The corporate costs utilised to allocate costs to below rail operations over the UT4 period make no allowance of targeted cost reductions of circa $[redacted]million included within Aurizon Holdings' FY 2014 budget; ▪ General Counsel and Company Secretarial costs - The UT4 forecast costs were based on the assumption of a higher shareholder base than actually eventuated. Aurizon Holdings' management advised that the FY2013 actual share registry costs are more reflective of the expected future costs, with this being reflected in the FY 2014 budget, which is in line with FY 2013 actual costs. Based on the above, the general counsel and corporate secretarial costs utilised as the basis of allocating costs to below rail activities appear overstated by $[redacted]million; ▪ Human resource costs - The UT4 forecast costs included a number of one off annual leave provision and long service leave adjustments. Consequently, we consider that the human resources costs used as the basis for the UT4 submission were understated, based on the FY 2014 budget costs by circa $[redacted] million; ▪ Safety, health and environment - The corporate costs utilised to allocate costs to below rail operations over the UT4 period make no allowance of the targeted safety, health and environment cost reductions of circa $[redacted]million included within Aurizon Holdings' FY 2014 budget. These cost savings relate to cost centres that have been classified as providing shared services to above rail and below rail activities; ▪ Enterprise branding - based on the actual costs of FY 2013 and budget FY 2014 costs, the FY 2013 enterprise branding costs used as the basis of the UT4 submission appear overstated by circa $[redacted] million; ▪ Enterprise branding - costs for FY 2013 ($[redacted]million) increased by 82% compared to FY 2012 costs ($[redacted]million). Aurizon Holdings has advised that the ongoing branding costs of Aurizon Holdings have increased since becoming a listed company as the branding team and strategy have been developed. However, Aurizon Holdings has not provided any justification of the underlying reasons that necessitate these cost increases; and ▪ Overall corporate overheads – stretch target reduction – Aurizon Holdings FY 2014 budget includes a negative amount of $[redacted]million in relation to a stretch target. This stretch target represents an overall corporate overhead cost saving that Aurizon Holdings' management is targeting in FY 2014. The saving has not been allocated to any individual cost centres. Additional stretch targets have also been incorporated within the Aurizon Holdings' FY 2014 budget within specific general ledger accounts. The FY 2014 budget incorporates total stretch targets of circa $[redacted]million. We note that no consideration was made in the UT4 corporate cost allocation of the above $[redacted]million stretch target. We consider that it would not be unreasonable for an adjustment to be made to the UT4 corporate overhead costs to include an allocation of each of the above.

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr>
<td>Task 3.2.5 – High Level Review of Forecast Operating Expenditure – Corporate Overhead costs (part 2) (continued)</td>
<td>RSMBC has been requested by QCA to compare the forecast operating expenditure to historical operating expenditure at both the regional and system levels.</td>
<td>Section 8

Pages 98 to 108</td>
<td>
The impact of these adjustments will differ depending on the corporate cost allocation methodology adopted. This is discussed in section 3 of our report.
<table>
<tr><th>2012/13 corporate cost allocation</th><th>Paragraph Reference</th><th>Total Corporate Cost Adjustment $'000</th><th>Aurizon Network/ Proposed Cost Allocation Method</th><th>Aurizon Blended Rate $'000</th><th>Direct Cost Allocation $'000</th><th>Alternative Blended Rate $'000</th></tr>
<tr><td>Finance</td><td>8.69 - 8.74</td><td rowspan="6">[redacted]</td><td>Blended/Direct</td><td rowspan="6" colspan="3">[redacted]</td></tr>
<tr><td>General counsel and company secretary</td><td>8.75 - 8.78</td><td>Blended/Direct</td></tr>
<tr><td>Human resources</td><td>8.85 - 8.89</td><td>FTEs[1]</td></tr>
<tr><td>Safety, health and environment</td><td>8.90 - 8.94</td><td>FTEs[1]</td></tr>
<tr><td>Enterprise strategy and branding</td><td>8.102 - 8.109</td><td>Revenue[2]</td></tr>
<tr><td>Overall Corporate Overhead stretch target *</td><td>8.115 - 8.117</td><td>Blended/Direct</td></tr>
<tr><td></td><td></td><td></td><td></td><td>7,907</td><td>3,629</td><td>6,848</td></tr>
</table>

Source: RSMBC Calculations
(costs in 30 June 2013 real terms)
** adjustment based on the full $25,800,000 stretch target for FY 2014 adjusted for CPI of 2.5% ($25.8 million divided by 1.025)*
[1] FTE allocation percentage remains unchanged under all scenarios
[2] FTE allocation percentage remains unchanged under all scenarios

For the purposes of the above table, we have demonstrated the impact of an adjustment representing 100% of the FY2014 stretch target.
</td>
</tr>
</table>

Section	Scope	Reference
Task 3.2.5 – High Level Review of Forecast Operating Expenditure – System Wide Direct costs (part 3)	RSMBC has been requested by QCA to compare the forecast operating expenditure to historical operating expenditure at both the regional and system levels.	Section 8 Pages 109 to 121

Key findings

A number of costs that were previously reported within the above system wide operating costs were reclassified and recognised within Aurizon Holdings' corporate costs in FY 2013.

These include:

- telecommunication backbone IT expenses (these have not been included in the above UT4 forecast costs); and
- utility costs (these were reported in actual Corporate Costs for FY 2013 but were included in the above UT4 forecast costs and were not included in the UT4 corporate overheads allocation).

The table below summarises the system wide costs of Aurizon Network for the 4 years ended 30 June 2013 adjusted to account for the above and the forecast system wide costs for the UT4 period in terms of absolute dollars and on a $/train path basis. The $/train path cost over the UT4 period is calculated based on both Aurizon Network's forecast train paths and, as requested by the QCA, a 10% reduction on Aurizon Network's forecast train paths to reflect a 10% reduction in forecast freight volumes.

Network Operations Operating Costs - Normalised	Year ended 30 June 2010 Actual $'000	Year ended 30 June 2011 Actual $'000	Year ended 30 June 2012 Actual $'000	Year ended 30 June 2013 Actual $'000	Year ending 30 June 2014 Forecast $'000	Year ending 30 June 2015 Forecast $'000	Year ending 30 June 2016 Forecast $'000	Year ending 30 June 2017 Forecast $'000
Total Operating expenses (excluding corporate overhead)	**64,410**	**57,174**	**59,052**	**53,585**	**57,578**	**60,230**	**65,401**	**67,220**
Normalisation adjustments								
Remove telephone communication back bone costs	(2,483)	(9,285)	(11,044)	-	-	-	-	-
Add: estimated utility costs - 30 June 2013	-	-	-	1,230	-	-	-	-
	61,927	**47,889**	**48,008**	**54,815**	**57,578**	**60,230**	**65,401**	**67,220**
Year on Year % change in cost		(22.7%)	0.2%	14.2%	5.0%	4.6%	8.6%	2.8%
Train paths	**48,576**	**41,145**	**40,366**	**43,292**	**47,372**	**52,832**	**56,272**	**60,676**
Year on Year % change in cost		(15.3%)	(1.9%)	7.2%	9.4%	11.5%	6.5%	7.8%
	$	$	$	$	$	$	$	$
$/train path	**1,275**	**1,164**	**1,189**	**1,266**	**1,215**	**1,140**	**1,162**	**1,108**
Year on Year % change in cost		(8.7%)	2.1%	6.5%	(4.0%)	(6.2%)	1.9%	(4.6%)
$/train path based on 10% reduction in forecasts	**1,275**	**1,164**	**1,189**	**1,266**	**1,350**	**1,267**	**1,291**	**1,231**
Year on Year % change in cost		(8.7%)	2.1%	6.5%	6.6%	(6.1%)	1.9%	(4.6%)

Source: Aurizon Network historical and forecast reports and RSMBC Calculations
Costs expressed in nominal dollars

On an absolute dollar basis, system wide operating expenses reduced by 22.7% during the year ended 30 June 2011, compared to the year ended 30 June 2010. This was primarily a result of cost reductions following the demerger with the Queensland Rail passenger business as staff were allocated between the two organisations and then appropriate resources were recruited in both organisations (primarily employee, consultancy and consumable costs).

Section	Scope	Reference	Key findings
Task 3.2.5 – High Level Review of Forecast Operating Expenditure – System Wide Direct costs (part 3)	RSMBC has been requested by QCA to compare the forecast operating expenditure to historical operating expenditure at both the regional and system levels.	Section 8 Pages 109 to 121	System wide operating expenses remained consistent in the year ended 30 June 2012, increasing by 0.2% (representing a reduction in real terms as the percentage increase was below inflation). System wide operating expenses increased by 14.2% in the year ended 30 June 2013 compared to the year ended 30 June 2012. This was primarily a result of the restructure implemented in the year ended 30 June 2013 that transferred the costs of the engineering and compliance functions from asset maintenance costs into system wide costs resulting in circa $5.8 million of additional employee costs being included within system wide operating expenditure. System wide operating expenses are forecast to increase by 5% during the year ending 30 June 2014, primarily as a result of the net impact of: ▪ a reduction in regulatory compliance costs related to UT4 development; ▪ wage inflation and CPI increases; and ▪ increased train control employee numbers to account for vacant positions during the year ended 30 June 2013. Over the remainder of the UT4 period, Aurizon Network has applied CPI and wage cost inflation to the 30 June 2013 forecast system wide operating expenses, other than one off additional costs in relation to regulatory division relating to forecast UT5 preparation costs in the years ending 30 June 2016 and 30 June 2017 of $2.5 million and $2.0 million, respectively. Based on our high level review of system wide direct costs, we consider that the following adjustment should be made: ▪ a reduction of $446,000 per annum (in 2013/14 dollars) in relation to forecast security costs in relation to trespass incidents, to reflect the actual costs incurred during the year ended 30 June 2012 compared to forecast. We also note that Aurizon Network is forecasting an increase in FTE numbers and employee costs for the year ending 30 June 2013 in: ▪ the train control centre - additional $2.2 million; and ▪ commercial development and commercial planning – additional $1.7 million. We are unable to assess the reasonableness of the proposed increased FTE numbers from a desk top review. We note, however, that the forecast increase in network size/volume may result in certain step changes in train control and business management costs which could justify some of the proposed increases in the train control centre and/or commercial development and commercial planning.

Section	Scope	Reference	Key findings
Task 3.2.6 – Total Cost Benchmarking	RSMBC has been requested by QCA to benchmark Aurizon Network's total operating expenses against its historic performance and similar companies.	Section 9 Pages to 122 to 128	The approach adopted for benchmarking Aurizon Network's total operating expenses is outlined in section 9 of this report. RSMBC has benchmarked costs based on the basis of: ▪ total absolute dollars; ▪ \$/track km ▪ \$/train path (where information is available); ▪ \$/GTK (forecast); and ▪ \$/GTK (contracted); Aurizon Network's costs have been benchmarked on contracted volumes in addition to forecast volumes on the basis that Aurizon Network will be required, to some degree, to resource to contract or peak capacity levels. **Comparison of the final year UT3 actual total cost (Operating + Overhead) to the first year UT4 forecast** The table below sets out the actual operating costs and GTK for the final UT3 year (the year ended 30 June 2013) and forecast operating costs and GTK for the first year of UT4.

	UT3 (2012/2013)	UT3 (Adjusted to 2013/2014)*	UT4 (2013/2014)	% change
Total Cost ($ million)	**118.285**	**122.701**	**123.552**	**0.7%**
Total Cost / Track Km	$45,670	$47,375	$47,703	0.7%
Total Cost / Train Path	$2,732	$2,834	$2,608	(8.0%)
Total Cost/ forecast GTK (cents)	0.165	0.171	0.153	(10.5%)

****adjustment to 2013/14 dollars based on a blended rate of CPI of 2.5% and labour cost indexation of 4.5%***

In the context of the forecast increase in volume, a 0.7% real increase in operating expenses does not appear unreasonable.

Benchmark to other comparable rail access providers using publicly available information and an indicative shadow benchmark

Details of the comparative operations identified, the sources of information utilised, and the limitations in respect of the data available are set out in Section 8, paragraphs 8.5 (Page 90) to 8.16 (Page 92) of this report.

The limitations outlined in paragraphs 8.5 to 8.15 of this report should be considered when assessing the results of the benchmarking exercise.

Section	Scope	Reference	Key findings
Task 3.2.6 – Total Cost Benchmarking (continued)	RSMBC has been requested by QCA to benchmark Aurizon Network's total operating expenses against its historic performance and similar companies.	Section 9 Pages to 122 to 128	In addition to the operational differences outlined in paragraphs 8.5 to 8.15 of this report it should be noted that Aurizon Network is part of a larger group with shared corporate services. Therefore, when benchmarking Overhead Costs against comparable entities, consideration also needs to be given to Aurizon Network having access to synergistic cost savings from its shared corporate services which would not be available to comparable, stand-alone companies, which are smaller in size than the Aurizon Holdings group. In establishing the indicative "Shadow" benchmark, with the assistance rail industry experts engaged by RSMBC as part of our review, we have: ▪ estimated the number of staff and average labour costs required based on functions, as a below rail / infrastructure manager, to manage the CQCN business as a standalone entity together with associated running costs. This is based on the experience of the rail industry experts in leadership and executive management roles on railways; and ▪ tested the reasonableness of the above using confidential information from comparable railways to which our rail industry experts have access. Due to the confidential nature of the information utilised, we are unable to disclose the details of these comparable railways. A number of adjustments were applied to the "base" cost model developed in order to reflect the current operational structure of Aurizon Network. The key adjustments within Operational Costs reflected: ▪ additional staff required due to the largely manual operation and management of yards; ▪ duplication and impact of remoteness of operation of control rooms; and ▪ higher level of activity apparent in Health, Safety & Environmental costs than is assumed as being required for a similar sized operator. Key adjustments within the Overhead Costs reflected: ▪ legal costs increased to reflect what appears to be a particularly large cost category for an established below rail operator; ▪ rent, rates and taxes to reflect the actual costs incurred by Aurizon Network within the Brisbane CBD; ▪ IT costs increased to reflect a higher fixed cost structure and the classification of telecommunication backbone expenses within corporate overheads; and ▪ high cost of Health, Safety and Environmental activities (as a consequence of Aurizon Network's safety commitment and performance and commitment to discharging obligations on coal loss management). We consider that the above matters may represent opportunities where future operational expenditure savings may potentially be generated.

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr><td>Task 3.2.6 – Total Cost Benchmarking (continued)</td><td>RSMBC has been requested by QCA to benchmark Aurizon Network's total operating expenses against its historic performance and similar companies.</td><td>Section 9

Pages to 122 to 128</td><td>

The indicative Shadow operator comparatives are adjusted to reflect the same track length, UT4 GTK and costs in 2013/2014 dollars.

No adjustments were made to reflect differences in operations or structure between the selected comparatives. This would entail further detailed analysis. Therefore, the comparatives can only be considered indicative.

The following table summarises the results of the benchmarking exercise.

<table>
<tr><th></th><th>UT4 (2013/14 forecast)</th><th>Brookfield Rail (2009 adj)</th><th>ARTC Hunter Valley (Avg 2013/14 forecast)</th><th>Indicative Shadow</th></tr>
<tr><td>Operating Cost ($ million)</td><td>57.579</td><td>14.330</td><td>29.730</td><td>52.83</td></tr>
<tr><td>Overhead Cost($ million)</td><td>65.973</td><td>20.854</td><td>16.671</td><td>40.24</td></tr>
<tr><td>Total cost ($ million)</td><td>123.552</td><td>35.184</td><td>46.401</td><td>93.07</td></tr>
<tr><td>Track Km (estimated)</td><td>2,667[8]</td><td>1,997[9]</td><td>1,336[10]</td><td>2667</td></tr>
<tr><td>Total Cost / Track Km</td><td>$46,326</td><td>$17,618</td><td>$34,731</td><td>$34,897</td></tr>
<tr><td>Forecast GTK (million)</td><td>80,513</td><td>23,532</td><td>43,309</td><td>80,513</td></tr>
<tr><td>Total Cost / Forecast GTK (cents)</td><td>0.153</td><td>0.150</td><td>0.107</td><td>0.116</td></tr>
<tr><td>Contract GTK (million)</td><td>107,138</td><td>N/a</td><td>43,309</td><td>107,138</td></tr>
<tr><td>Total Cost / Contracted GTK (cents)</td><td>0.115</td><td>N/a</td><td>0.107</td><td>0.087</td></tr>
</table>

(in 2013/2014 dollars)

</td></tr>
</table>

8 Source: Aurizon Network

9 Source: ARTC Hunter Valley business presentation dated March 2012

10 Source: Economic regulation Authority, WA, Final Determination on the Proposed 2009-2010 Floor and Ceiling Costs (30 June 2009).

Section	Scope	Reference	Key findings
Task 3.2.6 – Total Cost Benchmarking (continued)	RSMBC has been requested by QCA to benchmark Aurizon Network's total operating expenses against its historic performance and similar companies.	Section 9 Pages to 122 to 128	**Conclusion** This benchmarking exercise has a number of constraints that need to be recognised. In particular, thequality and level of information for the comparative below rail access providers is limited. There are a number of operational differences as outlined in paragraphs 8.5 to 8.15 and paragraph 9.17 that will impact on the costs of Aurizon Network compared to the comparable entities. The key points noted from our benchmarking of total operational expenditure are as follows: ▪ Aurizon Network has a significantly higher Total Cost per Track Km and per GTK than the comparable benchmark entities and the indicative "Shadow" Benchmark; ▪ Aurizon Network's Total Cost per Contracted GTK is 7.5% higher than ARTC (Hunter Valley). Indicating that the costs of Aurizon Network and ARTC (Hunter Valley) would be more closely aligned if volumes were operating at 100% contracted levels and there was no consequential increase in costs to Aurizon Network; and ▪ the primary difference between Aurizon Network and the comparable benchmark entities and the indicative "Shadow" Benchmark related to Overhead Costs. Based on a desktop benchmarking exercise, the ability to drill down further is limited. However, based on the benchmarking undertaken, the proposed UT4 Total Costs appear higher than the benchmark entities.

RSM Bird Cameron

Section	Scope	Reference	Key findings
Task 3.2.7 – Detailed Review of Forecast Operating Expenditure (part 1)	RSMBC has been requested by QCA to: ▪ assess Aurizon Network's forecast operating expenditure to ensure that the forecast cost does not reflect: ○ costs that are also included in other operating expenditure categories (i.e. there is no 'double-counting'); ○ operating expenditure associated with Aurizon Holdings Limited's above-rail activities; ○ other costs (e.g. overheads) associated with specific capital works projects, which are the subject of separate applications to the Authority; or ○ any other source of double-counting the consultant may identify.	Section 10 Pages 137 to 146	The issues noted from our review of Aurizon Network's forecast operating expenditure, reported by exception, are discussed below. **Corporate Overheads** *Duplication of depreciation costs* Aurizon Network's corporate plan for FY 2013 which was utilised to allocate corporate overheads to Aurizon Network operations included a duplication of forecast depreciation costs. This was due to depreciation costs being included in both a depreciation cost centre which included all forecast depreciation costs and within a number of the individual cost centres to which the assets belong (IT and safety, health and environment). The above has resulted in Aurizon Holdings' total forecast corporate overheads being overstated as follows: ▪ IT costs overstated by $5,898,000; and ▪ Safety, health and environmental costs overstated by $2,413,000. The impact of these adjustments is dependent on the corporate cost allocation methodology adopted. This is discussed in section 3 of our report. **System Wide Operating Expenses** *Allocation of Mackay Train Control Centre Costs to Non-Coal Activities* Aurizon Network has allocated 9% of costs in relation to the main Train Control Centre in Rockhampton to non-coal activities on the basis of average historical train kilometres for non-coal train services as a proportion of total train kilometres. Following the consolidation of the Rockhampton and Mackay train control centres, the Mackay train control centre has been maintained as a fully functional duplicate control facility utilised for both disaster recovery and training purposes. On the basis that the function of the Mackay train control centre is to act as both backup for the Rockhampton train control centre and to provide training for staff prior to working in the Rockhampton train control centre, we consider that it would be reasonable that 9% of these costs should also be allocated to non-coal activities.

Section	Scope	Reference
Task 3.2.7 – Detailed Review of Forecast Operating Expenditure (part 1) (continued)	RSMBC has been requested by QCA to: ▪ assess Aurizon Network's forecast operating expenditure to ensure that the forecast cost does not reflect: o costs that are also included in other operating expenditure categories (i.e. there is no 'double-counting'); o operating expenditure associated with Aurizon Holdings Limited's above-rail activities; o other costs (e.g. overheads) associated with specific capital works projects, which are the subject of separate applications to the Authority; or o any other source of double-counting the consultant may identify.	Section 10 Pages 137 to 146

Key findings

Amended Aurizon Network's forecast operating expenditure

The amended Aurizon Network forecast operating expenditure taking into account the impact of the matters set out above, together with the matters outlined in section 3 and 8 of this report will depend on the on the corporate cost allocation methodology adopted. This is discussed in section 3 of our report.

The tables below set out the impact of all of the matters identified by RSMBC both on a total cost basis (refer to section 11 for further breakdowns on a system basis) based on the following corporate cost allocation methodologies:

- Aurizon Network's original proposed corporate overhead allocation methodology;
- replacing the blended rate allocations with a direct cost allocation methodology; and
- utilising an alternative blended rate utilising directs costs instead of revenue, with other components remaining unchanged.

Amended Forecast Operating expenditure	Year ending 30 June 2014 Forecast $'000	Year ending 30 June 2015 Forecast $'000	Year ending 30 June 2016 Forecast $'000	Year ending 30 June 2017 Forecast $'000
Aurizon Network's proposed corporate overhead allocation methodology				
Amended system wide operating expenditure	56,994	59,628	64,780	66,581
Amended corporate overheads	53,913	56,214	58,532	60,758
Total amended operating expenditure	110,907	115,842	123,312	127,338
Direct cost allocation methodology				
Amended system wide operating expenditure	56,994	59,628	64,780	66,581
Amended corporate overheads	43,402	45,080	46,774	48,417
Total amended operating expenditure	100,396	104,708	111,554	114,997
Alternative blended rate utilising direct costs instead of revenue				
Amended system wide operating expenditure	56,994	59,628	64,780	66,581
Amended corporate overheads	49,190	51,285	53,393	55,419
Total amended operating expenditure	106,184	110,912	118,174	122,000

Source: RSMBC Calculations

Costs expressed in nominal terms

Section	Scope	Reference	Key findings
Task 3.2.7 – Detailed Review of Forecast Operating Expenditure (part 2)	RSMBC has been requested by QCA to: ▪ benchmark Aurizon Network's forecast operating expenditure (using the adjusted forecast cost, if applicable) against the operating expenditure of relevant industry comparators for efficiency; ▪ identify and explain any difference between the (adjusted) forecast cost and the benchmark cost; and ▪ determine whether or not Aurizon Network's (adjusted) forecast cost is reasonable.	Section 10 Page 134 to 136	The table below sets out the revised costs set out above for the year ending 30 June 2014 and compares these costs to the three benchmark entities (Brookfield Rail, ARTC (Hunter Valley) and the indicative "Shadow") discussed in Section 9 on a $/Track Km, a $/forecast GTK basis and a $/contracted GTK basis.

	Brookfield Rail	ARTC Hunter Valley	Indicative Shadow Benchmark	Aurizon Network Proposed Allocation Methodology	Direct Cost Allocation Methodology	Alternative Blended Rate Allocation Methodology
Operating Cost ($ million)	14.33	29.73	52.83	56.99	56.99	56.99
Overhead Cost ($ million)	20.85	16.67	40.24	53.91	43.40	49.19
Total Cost ($ million)	**35.18**	**46.40**	**93.07**	**110.90**	**100.39**	**106.18**
Total Cost / Track Km	$17,618	$34,731	$34,897	$41,582	$37,642	$39,813
Total Cost / Forecast GTK (cents)	0.150	0.107	0.116	0.138	0.125	0.132
Total Cost / Contracted GTK (cents)	N/a	0.107	0.087	0.104	0.094	0.099

(in 2013/2014 dollars)

This benchmarking exercise has a number of constraints that need to be recognised. In particular, that quality and level of information for the comparative below rail access providers is limited. There are a number of operational differences as outlined in paragraphs 8.5 (page 90) to 8.15 (page 92) and paragraph 9.17 (page 124) that will impact on the costs of Aurizon Network compared to the comparable entities.

The Aurizon Network proposed allocation methodology is most closely aligned with the benchmark costs for ARTC on a $/contracted GTK basis.

The direct cost allocation methodology is most closely aligned with the benchmark costs on a $/Track Km and a forecast $/GTK basis.

Conclusion

Aurizon Network has identified a number of factors and differences between its operations and that of the comparable entities that also impact on the assessment of the benchmarking results including:

- Aurizon Network operates a system with significant route electrification;
- Aurizon Network's CQCN system is predominantly in a remote location and in a region which endures more extreme weather conditions compared with the Hunter Valley coal system resulting in higher operational complexity and costs;
- Aurizon Network is part of a more complex supply chain structure when contrasted with the Hunter Valley coal system which interfaces with one port precinct which is governed by the HVCCC. The Central Queensland Ports have significant different operating modes which directly affect the capacity and operation of the Central Queensland Coal System. For example the Dalrymple Bay Coal Terminal has a cargo assembly model which places significantly more strain and operational complexity onto the rail and mine components of the supply chain compared with the Hunter Valley;

Section	Scope	Reference	Key findings
Task 3.2.7 – Detailed Review of Forecast Operating Expenditure (part 2) (continued)	RSMBC has been requested by QCA to: ▪ benchmark Aurizon Network's forecast operating expenditure (using the adjusted forecast cost, if applicable) against the operating expenditure of relevant industry comparators for efficiency; ▪ identify and explain any difference between the (adjusted) forecast cost and the benchmark cost; and ▪ determine whether or not Aurizon Network's (adjusted) forecast cost is reasonable.	Section 10 Page 134 to 136	▪ Interconnectivity of the four systems creates complexity with respect to access rights, cross system tariffs and operations to several terminals both domestic and export; and ▪ the introduction of short term transfers system will also add complexity to train scheduling. As a response to feedback from customers for greater flexibility in the management of access rights, including for the purpose of managing take or pay obligations, Aurizon Network has agreed with the proposal of the introduction of a process to facilitate short term transfers, by enabling customers within a cluster (or within a short geographical distance of each other) to seek pre-approval of a transfer. However, it is also noted that Aurizon Network is part of a larger group with shared corporate services. Therefore, when benchmarking overhead costs against comparable entities, consideration also needs to be given to Aurizon Network having access to synergistic cost savings from its shared corporate services which would not be available to comparable, stand-alone companies, which are smaller in size than the Aurizon Holdings group. We further note that Aurizon Network has incorporated a separate overhead allowance within the classification of its maintenance costs as discussed in Section 4 of this report. We are unable to ascertain whether the benchmark entities adopt a similar treatment within their classification of costs. We are not able to quantify the differences in costs that the above factors will have on the costs of Aurizon Network compared to the benchmark entities. Quantification of the above would require an extensive operational analysis of Aurizon Network and the benchmark entities. The benchmarking is therefore limited, and our ability to draw conclusions that can be substantiated is limited accordingly. We are unable provide a conclusion as to which of the above cost allocation methodologies is the most appropriate. The factors which need to be ascertained to make a conclusion that can be fully substantiated include: ▪ quantification of the normalisation of costs that would be required to be made to ARTC (Hunter Valley) and Brookfield Rail to account for the operational differences as set out in paragraphs 10.19 and 10.20; ▪ an operational review of Aurizon Network's operations and structure to assess the impact on Aurizon Network's costs of being required to be in a position to resource to contract or peak capacity levels; and ▪ a full operational and organisational analysis of Aurizon Network operations would be required to refine and validate the assumptions within the indicative "Shadow" benchmark. However, we would note that the direct cost allocation methodology is most closely aligned with the benchmark costs on a $/Track Km and a $/GTK basis. We consider that these two metrics are of particular relevance to measuring the efficiency of a below rail network operator.

Section	Scope	Reference	Key findings
Task 3.2.7 – Detailed Review of Forecast Operating Expenditure (part 3)	RSMBC has been requested by QCA to: ▪ determine whether Aurizon Network's forecast operating expenditure includes an adjustment to reflect productivity improvements over the regulatory period (e.g. x-factor or other adjustment); ▪ if Aurizon Network has not proposed an adjustment to reflect productivity improvements, assess whether or not this assumption is reasonable based on relevant factors (e.g. forecast volumes / capital expenditure) ; or ▪ if Aurizon Network has proposed an adjustment to reflect productivity improvements, assess the reasonableness of that adjustment taking into account relevant factors (e.g. forecast volumes / capital expenditure); and ▪ in either case, confirm the reasonableness, or not, of Aurizon Network's proposal. If Aurizon Network's proposal is unreasonable, determine an appropriate adjustment to Aurizon Network's forecast operating expenditure to reflect productivity improvements.	Section 10 Pages 137 to 146	Aurizon Network has advised a number of productivity benefits incorporated into the UT4 period summarised as relating to: ▪ capacity to manage an additional 40mt of volume and a 28% increase in contracted volume without the requirement for significant additional train control resources. Given that infrastructure is built in line with contractual requirements, Aurizon Network has structured the organisation to be able to manage movement of such tonnes (even if actual or forecast tonnes are lower); ▪ Aurizon Network is developing an integrated Network Planning, Scheduling and Execution tool, APEX (Project Pluto). APEX is expected to decrease the turnaround of the weekly plan by between 24-48 hours freeing up the planning team to improve ad hoc access requests and securing non-invasive maintenance windows. ▪ Electronic interface between maintenance teams and network control, to decrease the time it takes teams to get on track and reducing the access process turnaround time for the controllers. ▪ use of a train control simulator to improve train control capability, competence and consistency. ▪ Phase 2 of Project Pluto is in development to provide decision support capability and enable train controllers to make decisions in relation to the performance of the whole system rather than just to a single train control board; ▪ introduction of a process to facilitate short term transfers, by enabling customers within a cluster (or within a short geographical distance of each other) to seek pre-approval of a transfer. Whilst the provision of this service is not showing as productivity improvement in the train control area based on existing headcount, Aurizon Network asserts that there is a significant amount of additional work required to support short term transfers over the UT4 period, which is being absorbed and has not been included as an additional cost in the outer years of UT4 in the form of additional headcount; ▪ Aurizon Network has put forward an operator capping proposal to provide stronger performance incentives for operators by allowing the operator to attribute the consumption of access rights from over-railing to mitigate its take or pay obligations (either through its direct contracted access rights or through end-user nomination), prior to distributing those benefits to the broader system. Aurizon Network also commented that productivity in the area of train control should take into account the ability to improve capacity on the track by improving scheduling and efficient management of closures, with the benefit of additional efficiency created on the network outweighing the cost savings achieved from a reduction in headcount. RSMBC considers that the above, represents a number of valid productivity improvements which will improve the operational efficiency and safety of Aurizon Network's operations. Therefore, Aurizon Network appears to have implemented productivity improvements within its system wide operations. Given the above, the application of a further CPI-X adjustment to system wide direct costs does not appear to be required.

Section	Scope	Reference	Key findings
Task 3.2.7 – Detailed Review of Forecast Operating Expenditure (part 3) (continued)	RSMBC has been requested by QCA to: ▪ determine whether Aurizon Network's forecast operating expenditure includes an adjustment to reflect productivity improvements over the regulatory period (e.g. x-factor or other adjustment); ▪ if Aurizon Network has not proposed an adjustment to reflect productivity improvements, assess whether or not this assumption is reasonable based on relevant factors (e.g. forecast volumes / capital expenditure) ; or ▪ if Aurizon Network has proposed an adjustment to reflect productivity improvements, assess the reasonableness of that adjustment taking into account relevant factors (e.g. forecast volumes / capital expenditure); and ▪ in either case, confirm the reasonableness, or not, of Aurizon Network's proposal. If Aurizon Network's proposal is unreasonable, determine an appropriate adjustment to Aurizon Network's forecast operating expenditure to reflect productivity improvements.	Section 10 Pages 137 to 146	RSMBC notes that in an ASX investor presentation lodged on the ASX on 19 August 2013, Aurizon Holdings reported a drive to achieve sustainable cost reductions and efficiencies of $90 million in FY2014 and a further $140+ million in FY2015. Aurizon Network has advised that $100 million of these costs savings relate to shared support services. Aurizon Network further advised that some of these cost savings had been identified when the UT4 cost submission was prepared, but others had not and the specific areas where these savings will be achieved are still to be identified and may not be in areas in which Aurizon Network receives a significant allocation of costs. Whilst Aurizon Network's costs form a small proportion of Aurizon Holdings' total costs, we do not consider it unreasonable to expect that a proportion of the cost savings relate to below-rail activities. We therefore consider it reasonable that a CPI-X adjustment be included within the UT4 forecast operational expense to be applied to allocated corporate overhead costs to represent reasonable productivity improvement to be incorporated on a year by year basis. Based on a review of comparable entities Access Agreements, an X factor of between 0.625% (being the 25% of CPI (assumed to be 2.5%) applied within the Brookfield Rail Access Agreement) and 1% (being the factor provided for within the Melbourne Metro Access Agreement) would appear to be reasonable.

Section	Scope	Reference	Key findings
Task 3.3.1 – Advice on Interest During Construction ("IDC")	RSMBC has been requested by QCA to provide an opinion, including tax advice, on the reasonableness of the proposed Interest During Constriction methodology within section 8.6 of Volume 3 of the 3013 Draft Access Undertaking.	Section 11 Pages 142 to 146	The construction of many of Aurizon Network's capital expenditure projects span a large timeframe and Aurizon Network is not able to recover a return on an asset until that asset has been commissioned and included in the RAB (following approval by the QCA). Therefore, to enable Aurizon Network to obtain a return on the amounts expended on capital projects prior to the asset being commissioned, an IDC cost (based on the approved regulatory WACC) is accrued into the cost of an asset up to the date of an asset's inclusion in the RAB. The above treatment has been applied in prior access undertaking periods. During the review of the 2007/08 capital expenditure claim, Aurizon Network and the QCA agreed that the IDC should be calculated on the basis of accumulated interest on actual monthly capital expenditure up to the month of the assets inclusion in the RAB. The WACC was based on the QCA approved WACC, which is a post-tax nominal vanilla WACC. In Volume 3 of the 2013 Draft Undertaking, Aurizon Network's has submitted that a complexity has been identified with the use of a post- tax nominal vanilla WACC for the purposes of calculating the IDC to be applied in the calculation of asset values for inclusion in the RAB. The use of the post-tax nominal vanilla WACC requires the tax deductibility of capitalised debt interest costs (forming a proportion of the IDC based on the assumed gearing ratio) to be taken into account in the modelling of cash flows. The revised revenue model proposed by Aurizon Network for the UT4 period does not include a return on and of assets and associated interest cash flows on assets until the date they are forecast to be commissioned and included in the RAB. To rectify this, Aurizon Network proposes to utilise a post-tax nominal WACC formula comprising of the weighted average of the post-tax cost of debt and the post-tax cost of equity (referred to as the post-tax classic WACC). RSMBC has undertaken a review of Aurizon Network's proposed methodology and concluded that it appears reasonable. RSMBC has undertaken a review of Aurizon Network's assessment of the tax deductibility of interest during construction and concluded that it appears appropriate based on the relevant tax legislation. The utilisation of a post-tax nominal WACC of 7.36% appears reasonable on the basis that the 8.18% post-tax nominal vanilla regulatory WACC is approved. Any amendments to the post-tax nominal vanilla WACC will require an associated change to the post-tax nominal WACC utilised to calculate IDC.

Section	Scope	Reference	Key findings
Task 3.3.2 – Review of Capital Cost Build-Up	RSMBC has been requested by QCA to review Aurizon Network's methodology to calculate capital cost build-up, and how it links to the investment framework and risk contingency measures.	Section 12 Pages 147 to 153	Aurizon Network's investment management framework is based on investment estimates having a range of accuracy depending on the maturity level (development stage) of a project. The level of allowance for the inaccuracy of cost estimates changes from about +/- 50% (at concept stage) to about +/- 10% at feasibility stage (detailed design prior to execution). Aurizon Network's Cost Estimating Procedure states that capital cost estimates are built up from base estimated costs, which are then: ▪ adjusted for location and scale of the project ▪ adjusted for with allowances for design changes and quantity variances; and ▪ adjusted for risk contingencies. The level of contingencies to be applied to projects also varies on the level of project development. These are 30-50% at concept stage and 5%-15% at the feasibility stage. Aurizon Network apply contingencies, based on the project summary costs, to direct estimated project costs at three levels, as follows: ▪ for each discipline (trade); ▪ risk contingency based on a risk assessment process; and ▪ an overall project level. **Conclusion** Based on analysis undertaken, our conclusions are: ▪ the general polices adopted in the Investment Framework Manual and Estimating Procedure are considered reasonable and consistent with industry practice for civil / track projects. We note, however, that: o the Investment Framework Manual and Cost Estimating Procedure do not differentiate between various project types. For example, it would be expected that the cost accuracy or allocated contingency for system/technology projects would entail a higher level of variance/contingency compared to predominantly civil construction projects to allow for higher risks and uncertainties associated with system/technology projects.

Section	Scope	Reference	Key findings
Task 3.3.2 – Review of Capital Cost Build-Up	RSMBC has been requested by QCA to review Aurizon Network's methodology to calculate capital cost build-up, and how it links to the investment framework and risk contingency measures.	Section 12 Pages 147 to 153	○ the approach for calculating the discipline and overall project level contingency is not articulated in the Cost Estimating Procedure. It appears that this is left to the judgement of the respective manager of the project. However, we have been advised that Project Management is governed by Project Risk Profiling (utilising Monte Carlo analysis), Independent Peer Reviews of Estimate, Investment Framework Policies and Project Management Manual which all act as controls to manage the quantum and type of contingencies factored into the project budgets. The above process appears appropriate and mitigates the risk of contingency levels being inappropriately factored into capital estimates; and ▪ we have not been provided with sufficient information to enable us to ascertain with the Aurizon Network polices were applied for the sample of projects reviewed; and ▪ we have been advised by Aurizon Network that the Capital Indicator projects generally include discipline and risk contingency allowances, but do not include a general project contingency allowances. The Capital Indicator project forecasts are based on the most likely expenditure to occur based on the known schedule and scope of the project. Contingency budgets are only drawn down and forecasted once that risk becomes tangible and will be incurred. On the basis of our review, the approach adopted by Aurizon Network in relation to the capital cost build-up, and its linkage to the investment framework and risk contingency measures, appears reasonable.

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr><td>Maintenance Submission - Return on Assets</td><td>RSMBC has been requested by QCA to:
▪ obtain a copy of Aurizon Network's return on assets calculations for the UT4 period and check the calculation for mathematical accuracy and, where applicable, trace the calculations back to source documents;
▪ review the methodology employed by Aurizon Network to ensure that only assets relevant to maintenance activities have been included;
▪ discuss with Aurizon Network the logic for the utilisation of Gross Replacement Value in the calculation of the return on assets rather than book value and provide an opinion in relation to the reasonableness of this approach;
▪ assess the impact on the return on asset costs of the utilisation of asset's book values instead of the Gross Replacement Value; and
▪ undertake a high level assessment of reasonableness based on the proposed Regulatory Weighted Average Cost of Capital proposed by Aurizon Network.</td><td>Section 13

Pages 153 to 161</td><td>The Aurizon Network UT4 maintenance submission includes, in addition to direct maintenance costs and maintenance division corporate overheads, a charge in relation to return on fixed assets as set out in the table below (in Real FY 2012 dollars).

<table><tr><th>($'million)</th><th>FY 2014</th><th>FY 2015</th><th>FY 2016</th><th>FY 2017</th></tr><tr><td>Return on Assets</td><td>23.408</td><td>30.191</td><td>31.724</td><td>31.724</td></tr></table>Costs in 30 June 2012 real dollars

Return on assets ("ROA") relates to assets used in two areas:
▪ the specialised track services ("STS") group, delivers specialised below rail major maintenance and reconstruction; and
▪ the asset maintenance ("AM") group – undertakes infrastructure inspection, corrective and reactive maintenance not undertaken by Specialised Track Services.

The asset costs used as the basis for the return on assets calculation proposed by Aurizon Network are based on:
▪ the Gross Replacement Value ("GRV") of assets utilised rather than the book value of assets;
▪ a real Pre-Tax Average Cost of Capital of 6.83%; and
▪ a reduction for accounting depreciation charges included within the direct maintenance costs.

RSMBC considers that the approach proposed by Aurizon Network is reasonable on the basis that:
▪ the return on assets should reflect a return that compensates Aurizon Network for the commercial risks involved in providing the maintenance service, it is reasonable that the return on assets calculation be based on an estimated market return;
▪ historical written down asset values reflect the depreciated historical cost of the assets. Consequently, a return based on the written down value of the assets will not necessarily be consistent with value of those assets to a third party service provider. In a competitive environment, service providers can be expected to price their services having regard for the opportunity costs of utilising the assets to provide the maintenance services; and
▪ the use of replacement costs takes account of the opportunity costs of utilising the assets to provide the maintenance services.</td></tr>
</table>

Section	Scope	Reference	Key findings
Maintenance Submission - Return on Assets (continued(	RSMBC has been requested by QCA to: ▪ obtain a copy of Aurizon Network's return on assets calculations for the UT4 period and check the calculation for mathematical accuracy and, where applicable, trace the calculations back to source documents; ▪ review the methodology employed by Aurizon Network to ensure that only assets relevant to maintenance activities have been included; ▪ discuss with Aurizon Network the logic for the utilisation of Gross Replacement Value in the calculation of the return on assets rather than book value and provide an opinion in relation to the reasonableness of this approach; ▪ assess the impact on the return on asset costs of the utilisation of asset's book values instead of the Gross Replacement Value; and ▪ undertake a high level assessment of reasonableness based on the proposed Regulatory Weighted Average Cost of Capital proposed by Aurizon Network.	Section 13 Pages 153 to 161	Other conclusions from our review are summarised below: ▪ We have reviewed the mathematical accuracy of Aurizon Network's calculation and noted that the ROA on motor vehicles has been understated due to the utilisation of useful lives for these assets of 90 to 99 years. ▪ In the event that Aurizon Network adopted a 6 to 17 year useful life for motor vehicles rather than asset lives of 90 to 99 years, the ROA would increase by circa $1.8 million per year (estimated based on the mid-point asset life of 11.5 years) from FY 2014 to FY 2017. ▪ We have reviewed the calculation of the GRV for material assets within Aurizon Network's calculations and consider that calculations as reasonable. ▪ We consider that only assets relevant to maintenance activities have been included in the ROA calculation. ▪ The GRV methodology assumes that assets are always in "as new" condition. Therefore, the costs incurred in respect of major periodic maintenance should be excluded under the GRV methodology. We have been advised by Aurizon Network that major periodic maintenance costs are excluded from maintenance costs. However, as at the date of this report, we have not been able to obtain confirmation of this statement. We recommend that QCA obtain confirmation that major periodic maintenance costs are not included in respect of STS and AM assets. ▪ We recommend that QCA undertake a periodic review of the STS and AM assets over the UT4 period to ensure that the forecast asset purchases are undertaken in accordance with UT4. To the extent that assets included in UT4 are not acquired by Aurizon Network, the actual return on assets over the UT4 period should be adjusted accordingly. ▪ We estimate that the difference in the overall UT4 costs from adopting the GRV methodology rather than historical cost is up to $13 million over the UT4 period. However, this assessment does take into account the allowance for the major periodic maintenance costs that would be reflected within maintenance costs under the historical cost written down value methodology (but not under the GRV methodology) as we have not been provided with, nor are unable to make an accurate estimate of, these costs. The major periodic maintenance costs would need to be deducted from the difference to fully assess the difference of the change in methodologies over the UT4 period. ▪ We consider the real pre-tax WACC of 6.83% is calculated on a consistent basis with the Vanilla WACC, we consider that the WACC used to calculate the return on assets under the GRV methodology is reasonable. Any change to the regulatory Vanilla WACC of 8.18% would require the above real pre-tax WACC of 6.83% to be adjusted, accordingly.

Section	Scope	Reference	Key findings
Maintenance Submission - Return on Inventory and working capital	RSMBC has been requested by QCA to: ▪ request copies of Aurizon Network's calculations for the assigning of inventory values to below rail coal activities and assess for reasonableness, mathematical accuracy and, for a sample of items test the calculations back to supporting documentation; ▪ request copies of Aurizon Network's calculations for the return on working capital and assess for reasonableness and mathematical accuracy; and ▪ through discussions with Aurizon Network, assess the reasonableness of Aurizon Network's proposed return in inventory charges in light of the proposed change in modelling to include no intra-year cash flows which, prima facie, negates the need for a working capital / inventory allowance.	Section 14 Pages 162 to 165	Aurizon Network has included the following costs in relation to Returns on Inventory and Working Capital within its UT4 maintenance cost forecasts (in Real FY 2012 dollars).

($'million)	FY14	FY15	FY16	FY17
Return on Inventory	1.206	1.206	1.206	1.206
Return on Working Capital	1.079	1.163	1.197	1.218
Total	**2.285**	**2.369**	**2.403**	**2.424**

Source: Aurizon Network UT4 maintenance submission and Aurizon Network calculations
Costs in 30 June 2012 real dollars

RSMBC noted that in Volume 3 of the 2013 Draft Access Undertaking, Aurizon Network has proposed a change in the modelling framework for UT4, compared to UT3. The UT3 model assumed all costs and revenues are incurred at the end of the year. The free cash flow (or post-tax revenue) is then discounted by half the WACC based on the assumption that revenue is recovered uniformly across the year and therefore available for reinvestment. Currently, a working capital allowance is applied to recognise the need to manage these intra-year cash flows.

Under the proposed modelling framework, no intra-year discounting is applied. However, the need for a working capital allowance is no longer required. Aurizon Network states on page 275 of Volume 3 of the 2013 Draft Access Undertaking that it has, therefore, not included a working capital allowance in its proposed operating expenditure allowance for UT4.

The inclusion of a Return on Inventory and Return on Working Capital in the maintenance component of the operating expenditure forecast appears, prima-facie, contradictory to the above statement as the definition of working capital is generally accepted to include inventory.

RSMBC sought clarification from Aurizon Network in relation to the above. Aurizon Network has advised that the 'working capital allowance' related to the UT3 methodology requiring Aurizon Network to be compensated for the volatility inherent in the intra year cash flows, due to the UT3 modelling assuming smooth cash flows across the year with no volatility. This compensation for the volatility in the cash flows was termed as a "Working Capital Allowance". The terminology of "Working Capital Allowance" did not represent a return on working capital. RSMBC has confirmed the above statement with QCA.

On the basis of the above, we consider it reasonable for Aurizon Network to include a return on working capital and inventory within the maintenance costs claim.

<table>
<tr><th>Section</th><th>Scope</th><th>Reference</th><th>Key findings</th></tr>
<tr><td>Maintenance Submission - Return on Inventory and working capital (continued)</td><td>RSMBC has been requested by QCA to:
▪ request copies of Aurizon Network's calculations for the assigning of inventory values to below rail coal activities and assess for reasonableness, mathematical accuracy and, for a sample of items test the calculations back to supporting documentation;
▪ request copies of Aurizon Network's calculations for the return on working capital and assess for reasonableness and mathematical accuracy; and
▪ through discussions with Aurizon Network, assess the reasonableness of Aurizon Network's proposed return in inventory charges in light of the proposed change in modelling to include no intra-year cash flows which, prima facie, negates the need for a working capital / inventory allowance.</td><td>Section 14
Pages 162 to 165</td><td>Calculation of return on inventory
RSMBC has reviewed Aurizon Network's calculations underpinning the above calculation and no issues have been noted. We therefore consider the return on inventory calculation to be reasonable.
Calculation of return on working capital
Aurizon Network advised that the working capital allowance was calculated as the average monthly maintenance costs multiplied by the real pre-tax WACC of 6.83%. Aurizon Network advised that the assumption that one month of costs are required to be funded was on the basis on the average credit terms Aurizon Network has with its customers and therefore represents the time difference between when work is completed, and when payment is received.
RSMBC notes that the above calculation does not take into account consideration of credit terms Aurizon Network has with its external maintenance providers. For maintenance work undertaken by internal labour, the costs related to the work will be paid at approximately the same time as the work is incurred (dependant on the frequency that employees are paid). However, for some externally procured services, we would expect that a company the size of Aurizon Network, would negotiate credit terms with external suppliers such that there is also a lag between when goods are supplied or work is undertaken and when Aurizon Network pays for these supplies or work.
Therefore, we consider that the return on working capital calculation should be reduced to reflect supplier payment terms. Table 23, page 113 of the UT4 maintenance submission, Aurizon Network disclosed that 51% (FY 2014) to 52% (FY 2015 onwards) of maintenance costs are from externally procured resources. We therefore consider it reasonable that the return on working capital allowance be reduced by 51% to 52%.
The revised return on working capital would consequently be as set out below (in Real FY 2012 dollars)..
<table><tr><th>($'million)</th><th>FY 2014</th><th>FY 2015</th><th>FY 2016</th><th>FY 2017</th></tr><tr><td>Proposed Return on Working Capital at 6.83%</td><td>1.079</td><td>1.163</td><td>1.197</td><td>1.218</td></tr><tr><td>Amended Return on Working Capital at 6.83%</td><td>0.529</td><td>0.558</td><td>0.575</td><td>0.585</td></tr></table>Costs in 30 June 2012 real dollars
Aurizon Network calculated the return on inventory and return on working capital using the real pre-tax WACC of 6.83% On the basis that the real pre-tax WACC of 6.83% is calculated on a consistent basis with the Vanilla WACC, we consider that the WACC used to calculate the return on inventory and working capital is reasonable. Any change to the regulatory Vanilla WACC of 8.18% would require the above real pre-tax WACC of 6.83% to be adjusted, accordingly.</td></tr>
</table>

3. Task 3.2.1 – Review of Corporate Overhead Cost Allocation Methodology

Scope

3.1 RSMBC has been requested by QCA to review the corporate overhead cost allocation methodology for allocating corporate (Aurizon Holdings') overhead costs to Aurizon Network as set out in section 10.2 of Volume 3 of the 2013 Draft Access Undertaking.

3.2 The review includes undertaking an assessment of the benchmarking report prepared by Ernst & Young to determine the reasonableness of the allocated costs.

3.3 RSMBC has been requested to provide an opinion on the reasonableness of the cost allocation methodology proposed by Aurizon Network.

3.4 As part of the above process, RSMBC has been requested by QCA to consider relevant submissions from QRC, Asciano, BMA and BMC and RTCA.

Background

3.5 Aurizon Network has asserted in Volume 3 of the 2013 Draft Access Undertaking that the UT3 system wide and regional cost proposal materially understated corporate overhead costs associated with operating the below rail network.

3.6 The UT3 proposed operating costs included an allocation of corporate costs in accordance with the Aurizon Holdings Limited group allocation methodology for shared services, together with a notional corporate overhead allowance of $3 million per annum for all the functions that were not allocated, or partially allocated, via the shared service charge. Aurizon Network considers that this methodology did not include recovery, or full recovery of certain cost categories.

3.7 From December 2011 onwards, Aurizon Holdings implemented a restructure that transferred corporate overheads from operational business units to centralised functional divisions that provide services to all operational divisions. Therefore, corporate costs that were previously accounted for and contained as business unit costs are now recorded in corporate services areas.

3.8 The current functional structure of Aurizon Holdings is illustrated in the chart below.

3.9 Aurizon Network has also stated in Volume 3 of the 2013 Draft Access Undertaking that the corporate costs of Aurizon Holdings also reflect the costs of maintaining a listing on the Australian Securities Exchange, following the IPO of Aurizon Holdings in November 2010.

3.10 Aurizon Network has proposed a new methodology in relation to corporate overhead costs to apply in the UT4 period.

3.11 Aurizon Network has undertaken the following steps to assess corporate overheads for 2013/14:

- identified all Aurizon Holdings' corporate overhead costs/categories;
- allocated Aurizon Holdings' corporate overheads to the regulated below rail network business; and
- engaged Ernst & Young to benchmark the overheads allocated to Aurizon Network against a number of different organisations to assess the comparability of the proposed Aurizon Network corporate costs relative to these benchmarks.

3.12 The corporate costs utilised for the above allocation process were based on Aurizon Holdings' corporate plan for the 2013 financial year, updated to reflect 4 months of actual results and 8 months of forecast results.

3.13 The underlying principle that Aurizon Network has applied in its allocation of corporate overheads is to assess the costs that would be incurred by Aurizon Network if it was to operate as a stand-alone business.

3.14 Aurizon Network has, in summary:

- determined 226 overhead cost centres within Aurizon Holdings which require cost allocations to below rail activities;
- determined 5 different cost driver allocation methodologies to allocate a proportion of corporate overhead costs to Aurizon Network based on the following:
  - the number of network FTEs (excluding specialised track services and asset maintenance) plus an allocation of corporate resources from the Finance, Business Sustainability, Enterprise Services and Human Resources areas as a proportion of total FTEs;
  - network operations revenue (adjusted to subtract revenue associated with maintenance) as a proportion of total Aurizon Holdings' revenue;
  - direct costs (excluding inter-companies, labour and depreciation, but including capitalised costs) of Aurizon Network's business (not including specialised track services and asset maintenance) as a proportion of total Aurizon Holdings direct costs (as defined above);
  - a blended allocator based on the average of:
    - the number of network FTEs (excluding specialised track services & asset maintenance) plus an allocation of corporate resources from the Finance, Business Sustainability, Enterprise Services and Human Resources areas as a proportion of total FTEs;

- network operations revenue (adjusted to subtract revenue associated with maintenance) as a proportion of total Aurizon Holdings' revenue; and
- the carrying value of Aurizon Network's regulated Property, Plant & Equipment assets as a proportion of Aurizon Holdings' total Property, Plant & Equipment assets (as at 30 June 2012); and

  - a 100% allocation for overhead costs that can be 100% attributed to Aurizon Network operations.

3.15 The cost allocations applied to the 2012-13 forecast costs are as set out below.

Cost Driver	Cost Allocation ($)	# of Cost Centres
Network FTE	2,326,613	61
Network revenue	2,197,261	4
Network direct costs	3,103,746	8
Blended rate	41,565,558	141
100% allocation	14,276,782	12
Total	**63,469,961**	**226**

3.16 Proposed corporate costs for 2013/14 onwards within the UT4 period are based on those calculated for 2012/13 adjusted for:

- labour inflation factors for allocated labour costs based on forecasts provided by BIS Shrapnel; and
- a CPI adjustment of 2.5% based on the Reserve Bank of Australia's published target inflation rates.

3.17 Based on the above methodology, Aurizon Network proposes the following corporate costs for the UT4 period.

UT4 Proposed corporate overhead costs	Year ending 30 June 2014 Forecast $'000	Year ending 30 June 2015 Forecast $'000	Year ending 30 June 2016 Forecast $'000	Year ending 30 June 2017 Forecast $'000
Finance	9,385	9,849	10,313	10,753
General counsel and company secretary	7,605	7,865	8,129	8,388
Internal audit and enterprise management	2,054	2,151	2,248	2,341
Information technology	18,998	19,637	20,285	20,924
Human resources	3,439	3,620	3,801	3,972
Safety, health and environment	6,632	6,949	7,269	7,572
Enterprise real estate	5,111	5,249	5,390	5,533
Enterprise procurement	2,960	3,102	3,246	3,381
Enterprise strategy and branding	1,818	1,882	1,946	2,009
Managing director/CEO	2,203	2,310	2,417	2,519
Non-benchmarked functions	5,768	6,005	6,244	6,474
	65,973	68,619	71,288	73,866

Source: Volume 3 of the 2013 Draft Access Undertaking
Costs in nominal dollars

Work undertaken by RSMBC

3.18 We have undertaken a review of the proposed corporate overhead costs and performed the following procedures:

- obtained an understanding of how the 226 cost centres have been determined and how the costs have been allocated to each cost centre;
- reviewed the cost centre determination and assessed the allocation of direct costs and shared costs across the various cost centres for reasonableness;
- obtained an understanding of how Aurizon Network determined the cost driver to be utilised in allocating the overheads of each cost centre;
- reviewed the cost driver allocation methodology for reasonableness; and
- reviewed the Ernst & Young benchmarking report utilised by Aurizon Network to substantiate of the allocated costs for reasonableness.

3.19 RSMBC has also, as part of sub-task 3.2.6 (section 10 of this report), undertaken a benchmarking exercise to independently benchmark the proposed operating costs.

RSMBC Comments

Cost centre determination

3.20 We held discussions with Aurizon Network management to understand the process undertaken in determining the costs centres to be utilised in the allocation of corporate overheads.

3.21 The cost centre determination was based on the internal financial reporting structure utilised by Aurizon Holdings in developing its 2013 updated corporate plan.

3.22 Aurizon Holdings is currently undergoing a process to consolidate a number of its cost centres.

3.23 Whilst the consolidation of cost centres will result in a simplification of the cost allocation process in the future, this consolidation may also reduce Aurizon Network's ability to separately identify and allocate costs solely relating to above and below rail activities.

Classification of cost centres

3.24 RSMBC has undertaken a detailed review of the classification of cost centres between shared costs, costs 100% allocated to below rail activities and costs 100% allocated to above rail activities.

3.25 A summary of Aurizon Network's basis of classification of cost centres is summarised below.

Function	2012/13 Allocated Cost ($'000)	Functional areas determined as shared	Functional areas 100% allocation to below rail	Functional areas 100% allocation to above rail	RSMBC Comments
Finance	9,004	Finance, tax, treasury, investor relations and financial reporting & planning	None	Project finance, finance marketing – coal and bulk	None
General counsel and company secretary	7,372	Company secretary, and legal services – Aurizon Holdings	Legal services - Network	Legal services – freight group	None
Internal audit and enterprise risk management	1,972	Internal audit, business risk and worker's compensation	None	None	None
Information technology	19,755	All IT cost centres	None	None	Telecommunications backbone costs of circa $[redacted]million that relate to below rail activities have been included as part of central overheads and not allocated separately to below rail. During the UT3 period, these costs were recognised as direct costs.
National policy/corporate services	861	National policy and corporate services	None	None	None

Function	2012/13 Allocated Cost ($'000)	Functional areas determined as shared	Functional areas 100% allocation to below rail	Functional areas 100% allocation to above rail	RSMBC Comments
Human resources	3,179	Talent and organisational development, resourcing and services, remuneration and support, employee relations, external relations and communication	Network HR unit (allocated between FTE's involved in contestable and non-contestable services)	Operations HR units and corporate sponsorship and events	None
Safety, health and environment	6,369	SH&E cost centres and costs other than those directly attributable to below and above rail activities	Network dedicated safety officers, and network dedicated cost centres	Costs centres relating to SH&E for intermodal, bulk, coal haulage, and other non-network functions. Non-network dedicated safety officers, non-network related licences and consultancy costs	RSMBC noted costs of $868,237 included in shared activities that related solely to above-rail activities (train simulator costs and Townsville property depreciation) – refer paragraph 3.30
Enterprise real estate	4,980	Aurizon Holdings office – Ann St rent and associated costs, building services	Property costs specific to below rail locations	Property costs specific to above rail locations	RSMBC noted costs of $168,269 included in below rail activities that did not relate to Network activities and, in our opinion, should not be allocated (property disposal costs – vacant land and surplus housing) – refer paragraph 3.30

Function	2012/13 Allocated Cost ($'000)	Functional areas determined as shared	Functional areas 100% allocation to below rail	Functional areas 100% allocation to above rail	RSMBC Comments
Enterprise procurement	2,845	Procurement divisions	None	None	None
Innovation, operational excellence, enterprise effectiveness	3,256	Innovation, operational excellence, enterprise effectiveness	None	None	None
Enterprise strategy and branding	1,762	Enterprise strategy and branding	None	None	None
Board & CEO	2,115	Board and CEO costs	None	None	None
Total	63,470				

3.26 Following our initial review of the allocation of safety, health and environmental costs centres, Aurizon Network presented RSMBC with an alternative methodology for the classification these cost centres. In forming the 2014 corporate plan, the majority of safety, health and environment costs centres have been consolidated. Therefore, Aurizon Network has indicated that it no longer has the ability to separately identify cost centres that solely relate to above and below rail activities (other than one minor cost centre which relates to above rail activities). Therefore, the revised allocation applied the blended cost allocator to the majority of Aurizon Network's budgeted safety, health and environmental costs.

3.27 For the purposes of determining the corporate costs for safety, health and environment for UT4, we consider that the original analysis undertaken by Aurizon Network provides a more accurate representation of the costs that relate to the below rail operations.

3.28 The original analysis was more detailed, with specific cost centres and employee costs that related solely to above and below rail activities being identified and allocated accordingly as set out below:

Allocation	Original % of total costs	Revised % of total costs
Allocated directly to below rail	12.6%	0.0%
Allocated directly to above rail	37.5%	1.7%
Costs shared and allocated using an allocation method	49.9%	98.3%

3.29 In the absence of further explanation, we consider that this analysis is more accurate and less subjective, as a lower % of costs are allocated using a subjective allocation methodology.

3.30 The table below summarises the impact, using Aurizon Network's proposed methodology, of the matters set out on page 48 of this report to the 2013/14 corporate costs proposed by Aurizon Network in the UT4 submission.

2013/14 corporate cost allocation reconciliation	Note	Adjustment $'000	% allocated to below rail	Total $'000
2013/14 corporate costs proposed in UT4				65,973
Adjustment for train simulator costs	1	(546)	24.55%	(134)
Adjustment for Townsville property depreciation	1	(322)	5.29%	(17)
Adjustment for property disposal costs	2	(168)	100%	(168)
				(319)
2.5% CPI on above adjustments				(8)
Adjusted 2013/14 corporate costs				65,646

Source: RSMBC Calculations
Note 1 - based on Aurizon Holdings Corporate Fixed Asset Register and depreciation calculation spreadsheet
Note 2 - based on Aurizon Holdings QR Properties cost centre detailed cost breakdown

Cost driver allocation methodology review for shared costs

3.31 Aurizon Network has, for the majority of costs, utilised the following causal driver based allocations:

Cost Driver	Cost centres applied to
Network Operations FTEs	HR and payroll Selected Safety, Health and Training
Network Operations revenue	Share based payment expenses to senior management Branding and Enterprise Strategy
Network Operations direct costs	Accounts payable and procurement
Blended rate (calculated as the average of Network Operations Revenue, FTE's and asset base)	Various Network specific cost centres where no clear driver could be determined.

3.32 In addition to the above, Aurizon Network has calculated an allocation of its Ann Street, Brisbane office property costs on the basis of the proportion of space allocated to Aurizon Network FTEs.

3.33 In assessing the cost driver allocation methodologies, we have taken into account that Aurizon Network has proposed a separate corporate overhead component be applied in its maintenance proposal amounting to circa $12.09 million for 2013/14.

3.34 The majority of the allocated cost relates to cost centres where no clear causal cost driver could be determined.

3.35 Aurizon Network has utilised a blended allocator rate after undertaking an analysis of other regulated businesses in Australia and cost allocation methodologies applied.

3.36 Aurizon Network states on page 230 of Volume 3 of the 2013 Draft Access Undertaking that Energex was identified as a comparable business and its blended rate components were adopted for Aurizon Network. The blended allocator used was based on three cost drivers being asset value, revenue and FTE's.

3.37 Aurizon Network states in page 231 of Volume 3 of the 2013 Draft Access Undertaking that:

- asset values were considered an acceptable component of the blended allocator as Aurizon Network is an asset intensive business, similar to Energex (and most other regulated infrastructure providers);
- revenue was considered an acceptable component of the blended rate as regulatory precedent shows that it is commonly used by other entities using blended rates such as Energex and Powercor/Citipower; and
- FTEs were considered an acceptable component of the blended rate and are commonly used as a causal allocator. Regulatory precedent also supports the use of FTEs as a component in a blended allocator.

3.38 A summary of regulatory precedents was also provided by Ernst & Young as part of the benchmarking exercise that was undertaken. A copy of these precedents as referred to in Ernst & Young's benchmarking exercise is set out in Appendix 4.

3.39 The selection of a cost allocation methodology to allocate costs where there is insufficient information to allocate based on the causal cost drivers, using an activity based costing methodology, is highly subjective. The allocation methodology requires some judgement. The allocation methodology adopted by Aurizon Network, along with other methodologies, has been previously accepted by regulators.

3.40 We have reviewed the position presented by Aurizon Network and have also reviewed the publicly available information in relation to the regulatory precedents and comment as follows.

Energex cost allocation methodology[11]

3.41 Energex is required, as part of the National Electricity Rules, to submit its Cost Allocation Method to the AER for approval.

3.42 As part of its Cost Allocation Method, Energex allocates indirect costs (overheads), being costs that are necessarily incurred in the provision of distribution services but not directly attributed by a work order or invoice to a specific activity or service. Overhead costs in Energex's context include common or shared functions that support all distribution services such as:

- corporate support costs including the CEO, finance, human resources and legal;
- staff training & travel;
- consultants costs that are not directly attributable to services; and
- occupancy costs.

3.43 Energex has allocated the above indirect costs between its regulated activities (after initially allocating costs to non-regulated services) based on the proportion of direct costs within each business expressed as a percentage of total direct costs.

3.44 In page 21 of its cost allocation methodology, Energex states:

"Energex has determined that overheads will be allocated to services on the basis of total direct spend as this reflects a strong correlation with the consumption of the indirect overhead."

3.45 Based on page 4 of Energex's financial statements for the year ended 30 June 2013, regulated services revenue comprised 95.0% ($2.17 billion) of total revenue from the provision of services and goods ($2.29 billion).

3.46 The blended allocation methodology referred to by Aurizon Network was applied to the non-regulated services of Energex, prior to allocation of overheads to regulated services. The non-regulated services represent a small proportion of the Energex's business.

[11] Energex cost allocation methodology – February 2009

Other regulatory precedents

3.47 Ernst & Young's Summary of Precedents (Appendix 4), indicates that the most commonly used cost allocation method is the direct cost methodology.

3.48 The direct cost methodology has been applied by:

- Energex (as discussed above);
- Aurora Energy (for a large number of its cost centres)[12];
- Jemena;
- Victorian Rail Track Corporation; and
- Dalrymple Bay Coal Terminal ("DBCT")

3.49 A blended allocator, as proposed by Aurizon Network has been utilised by:

- Energex – for a relatively small proportion of its business; and
- CitiPower & Powercor in allocating shared costs.

3.50 In assessing Aurizon Network's proposed blended rate, we consider:

- that there is generally a stronger correlation between an entity's direct costs and its corporate overhead costs than the value of an entity's assets and its corporate overhead costs. However, based on Ernst & Young's benchmarking report, we note that there is some regulatory precedent for the use of asset values in a regulatory cost allocation process (as set out in paragraph 3.49). We further note that circa 59% of Aurizon Network's direct costs relate to energy costs, which may reduce the correlation between direct costs and corporate overhead costs; and
- the use of direct costs instead of revenue to be more appropriate as part of any blended allocation rate adopted.

3.51 Based on our analysis, we consider that:

- an alternative methodology to apply to cost centres where no clear cost driver can be determined may be to utilise direct costs as a percentage of total direct costs on the basis that:
  - this is the most commonly adopted methodology in the regulatory environment;
  - it is the primary methodology adopted by Energex, the company that Aurizon Network has identified as a comparable business;
- we note that circa 59% of Aurizon Network's direct costs relate to energy costs, which may reduce the appropriateness of the direct cost methodology. However, we still consider that this methodology should be considered.
- in calculating the proportion of direct costs, we consider that the direct costs attributed to Aurizon Network should:
  - exclude maintenance costs, on the basis that Aurizon Network has proposed a separate corporate overhead component in relation to maintenance costs; and

[12] Aurora Energy cost allocation methodology issue 6.3 – May 2011

- exclude capitalised costs, on the basis that Aurizon Network capitalises a separate corporate overhead component into its capitalised expenditure; and

- should a blended allocation factor be utilised, we consider that the revenue component could be swapped with a direct cost component (calculated as set out above) on the basis that a large proportion of Aurizon Network's revenue relates to the return on and the return of capital in relation to the value of the RAB. The utilisation of revenue would therefore appear to include reference to the value of Aurizon Network's assets twice.

3.52 We note that the application of the direct cost methodology would result in an allocation of information technology costs at a level below the cost of the telecommunications backbone (these costs were previously recognised within direct business costs in UT3). Therefore, we consider that, if this methodology was adopted, the telecommunication backbone costs of circa [redacted] million should be allocated 100% to Aurizon Network prior to the utilisation of the blended cost allocator.

3.53 RSMBC has benchmarked the revised UT4 2013/14 total operating expenses under each of the above methodologies, together with Aurizon Network's proposed methodology in section 10 of this report. There are a number of limitations in relation to the benchmarking exercise that are outlined in section 10 that need to be considered when assessing the benchmarking results.

Application and calculation of other cost allocation drivers

3.54 We have reviewed the application and calculation of the other cost allocation drivers.

3.55 In calculating the cost allocation percentage for direct costs (applied to accounts payable and procurement), Aurizon Network has included capital expenditure. Aurizon Network includes a corporate service charge in its capital expenditure - labour and contractor costs - to capitalise corporate costs associated with capital expenditure.

3.56 We, therefore, do not consider it appropriate to include capital expenditure in the allocation of corporate costs to the below rail operations.

3.57 In addition, Aurizon Network proposes to apply the blended allocator to costs in relation to worker's compensation insurance. These costs were estimated at [redacted] for 2012/13 as the basis of allocation of costs to Aurizon Network. Under the blended rate allocation methodology, 24.55% of these costs are allocated to below rail operations. We consider that it would be reasonable to utilise FTE numbers as the basis of allocating worker's compensation insurance costs as, in our opinion, there is a strong causal relationship between FTE numbers and these costs. As set out in section 4 of our report, no workers compensation insurance costs have been allocated to the maintenance overheads division. We therefore consider it reasonable to include maintenance FTE numbers in the allocation of the workers compensation insurance costs.

3.58 Based on Aurizon Network's FTE numbers of [redacted][13] excluding maintenance staff and approximately [redacted][14] FTEs in maintenance, Aurizon Network has [redacted] FTEs out of the total Aurizon Holdings' FTE numbers of [redacted][14], resulting in an allocation of 15.43% of these costs to below rail operations.

3.59 Other than the issues noted above, the application and calculation of other cost allocation drivers did not appear unreasonable.

Impact of matters identified

3.60 To demonstrate the impact of the matters identified, RSMBC has, utilising Aurizon Network's cost allocation model, recalculated the proposed corporate cost allocation for the year ended 30 June 2014 and in total over the UT4 period, based on:

- Aurizon Network's proposed methodology adjusted for the matters set out on page 48;
- Aurizon Network's proposed methodology (adjusted for the matters set out page 48 and paragraphs 3.55 to 3.57);
- replacing the blended rate with a direct cost allocation methodology (adjusted for the matters set out page 48 and paragraph 3.55 to 3.57);
- utilising an alternative blended rate utilising directs costs instead of revenue, with other components remaining unchanged (adjusted for the matters set out page 48 and paragraph 3.55 to 3.57).

3.61 For the purposes of our calculation, the direct costs percentage allocation is based on amounts published in Aurizon Holdings 2012/2013 audited annual report and amounts published in Aurizon Network's 2012/13 audited annual report, as set out below:

Direct cost allocation calculations		
Aurizon Network Direct Costs *	**$'000**	
Consumables	300,000	
Employee benefits expense	64,000	
Other expenses	6,000	
Total direct costs	370,000	
Less: maintenance costs **	(153,000)	
	217,000	(A)
Total Aurizon Holdings Direct Costs ***		
Consumables	1,353,000	
Employee benefits expense	1,182,000	
Total costs	2,535,000	
Less: overhead costs ****	[redacted]	
Total direct costs	[redacted]	(B)
Direct costs allocation percentage (A/B)	[redacted]	

* Source: Aurizon Network Audited Annual Report - 30 June 2013
** Source: Aurizon Network Audited Annual Report - 30 June 2013 (Note 5)
*** Source: Aurizon Holdings Audited Annual Report - 30 June 2013
**** Source: Aurizon Holdings - Historical Corporate Costs Spreadsheet

[13] Based on Aurizon Network corporate allocation calculations

[14] Based on Deloitte Access Economics – Estimate of QR Network Maintenance Services Overheads, 1 November 2012

3.62 The cost allocations for 2013/14 under the revised methodologies are as set out in the table below.

2013/14 corporate cost allocation	Aurizon Blended Rate 1 * $'000	Aurizon Blended Rate 2 ** $'000	Direct Cost Allocation $'000	Alternative Blended Rate $'000
Finance	9,385	9,240	4,108	7,969
General counsel and company secretary	7,605	7,605	6,471	7,324
Internal audit and enterprise management	2,054	1,870	969	1,647
Information technology	18,998	18,998	16,568	16,279
Human resources	3,439	3,439	2,869	3,298
Safety, health and environment	6,477	6,632	5,546	6,363
Enterprise real estate	4,938	5,111	5,111	5,111
Enterprise procurement	2,960	1,425	1,419	1,423
Enterprise strategy and branding	1,818	1,818	1,578	1,759
Managing director/CEO	2,203	2,203	930	1,888
Non-benchmarked functions	5,768	5,768	2,436	4,942
	65,646	64,109	48,005	58,002

Source: RSMBC Calculations

* excluding adjustments to direct costs allocator to remove capital expenditure and amendment of worker's compensation costs

** including adjustments to direct costs allocator to remove capital expenditure and amendment of worker's compensation costs

3.63 The total allocated corporate costs over the UT4 period under the revised methodologies are set out in the table below.

UT4 corporate overhead costs allocation	Year ending 30 June 2014 Forecast $'000	Year ending 30 June 2015 Forecast $'000	Year ending 30 June 2016 Forecast $'000	Year ending 30 June 2017 Forecast $'000
Aurizon Network - UT4 submission costs	65,973	68,619	71,288	73,866
Revised - Aurizon Network blended rate methodology 1 *	65,646	68,284	70,944	73,514
Revised - Aurizon Network blended rate methodology 2 **	64,109	66,665	69,244	71,738
Revised - Direct Costs Allocation	48,005	49,798	51,610	53,374
Revised - Alternative blended rate allocation	58,002	60,316	62,651	64,908

Source: RSMBC Calculations

Costs in nominal dollars

* excluding adjustments to direct costs allocator to remove capital expenditure and amendment of worker's compensation costs

** including adjustments to direct costs allocator to remove capital expenditure and amendment of worker's compensation costs

Review of Ernst & Young Benchmarking Report

3.64 Aurizon Network commissioned Ernst & Young to undertake a benchmarking exercise to assess the reasonableness of Aurizon Network's proposed corporate costs.

3.65 The process undertaken by Ernst & Young in its benchmarking study is set out in Appendix 5.

3.66 The results of the benchmarking study, as presented by Ernst & Young, are set out below.

Ernst & Young Benchmarking report results	Allocated Costs $'000	Benchmarks: Cumulative Industry $'000	Benchmarks: Rail Company 1 $'000	Benchmarks: Rail Company 2 $'000
Finance	9,004	8,491	11,087	6,487
Enterprise services - general counsel and company risk	7,372	2,225	1,896	11,810
Enterprise services - internal audit and enterprise risk management	1,972	1,254	794	1,153
Enterprise services - information technology	19,755	14,932	27,779	7,525
Enterprise services - non-benchmarked: national policy	861	861	-	-
Human resources	3,179	6,947	8,100	6,133
Business sustainability - safety, health and environment	6,369	1,748	1,256	6,703
Business sustainability - enterprise real estate	4,980	4,600	16,733	4,600
Business sustainability - enterprise procurement	2,845	1,159	843	2,490
Business sustainability - non-benchmarked	3,256	3,256	-	-
Strategy	1,762	1,093	1,093	8,728
Board & CEO	2,115	3,157	-	5,974
	63,470	49,723	69,581	61,603
Adjustment to include non-benchmarked for comparability				
Enterprise services - non-benchmarked: national policy	-	-	861	861
Business sustainability - non-benchmarked	-	-	3,256	3,256
Adjusted benchmark costs	63,470	49,723	73,698	65,720

Source: Ernst & Young - Benchmarking of Corporate Overhead Costs for Aurizon Network Operations - 22 January 2013

3.67 There are a number of issues identified by RSMBC in relation to the Ernst & Young benchmarking report detailed as follows:

Normalisation of corporate overheads using revenue

3.68 The sole normalisation factor that Ernst & Young has utilised to account for differences in the size and nature of the comparable companies is revenue. Overheads have been calculated as a percentage of revenue and then adjusted, on a pro-rata basis, using Aurizon Network's total revenue, after a deduction of revenue related to the recovery of maintenance costs to account for a separate maintenance overhead cost being claimed within Aurizon Network's maintenance proposal.

3.69 The above normalisation assumption assumes that corporate overheads are fully variable (that is increase or decrease as a consistent percentage of revenue).

3.70 Corporate overheads, by their nature, may be fixed, or have a variable component. Therefore, as companies increase in size, it is not uncommon for corporate overheads as a percentage of revenue to reduce.

3.71 Although the two comparable companies utilised by Ernst & Young have not been named, we understand through discussions with Ernst & Young, that both of these entities generate lower revenues than the benchmark revenue utilised by Aurizon Network. Based on the information set out on page 23 of Ernst & Young's benchmarking report, we can also ascertain that the revenue of Company 2 is circa 82%) of the total revenue of Aurizon Network used in the benchmarking report.

3.72 Therefore, we consider that the normalisation adjustments applied to these entities by Ernst & Young may result in an overstatement of corporate overheads of these entities, above the level we would expect if either of these entities were to increase to a comparable size (in terms of revenue) as Aurizon Network.

Benchmarking to Aurizon Network as a 'stand-alone' entity

3.73 The benchmarking exercise has been based on the costs that would be incurred by Aurizon Network as a stand-alone below rail network operator. Therefore, overheads have been normalised, as discussed above, based on the revenue of Aurizon Network, adjusted for maintenance cost recoveries.

3.74 The above methodology ignores the fact that Aurizon Network is part of a larger group with centralised functional overheads. This centralised functional overhead structure has been adopted by Aurizon Holdings to derive cost savings.

3.75 By benchmarking Aurizon Network as a stand-alone entity, all of the cost savings derived from the structure adopted by Aurizon Holdings are ignored. This does not seem reasonable, and we would expect that a proportion of the savings derived from the centralisation of these functions should be passed on to Aurizon Network. The benchmarking exercise would therefore need to include adjustments to reflect these savings which may not be available to the stand-alone benchmark entities.

Comparability of Company 1 used in benchmarking study

3.76 Ernst & Young has defined company 1 in the benchmarking study as a large State-owned Asia-Pacific Rail company operating network, yards and facilities, freight, passenger, rolling stock and engineering services.

3.77 The operations of this entity, which include network operation, are more expansive than Aurizon Network and include the complexities of operating a passenger network. The proportion of services of this entity that relate to the operation of freight, passenger, rolling stock and engineering services is not clear from Ernst & Young's report.

Cumulative industry benchmarks

3.78 Ernst & Young has utilised data from the distribution/transport industry data sets of APQC. The report does not present any analysis in relation to the activities of the entities which comprise this data set to ensure that they are relevant as a benchmark to Aurizon Network.

3.79 We have been advised by Ernst & Young that the classification of companies within APQC's industry sectors is based on NAICS which is a widely used industry classification. The NAICS industry sector includes some sub-categories such as rail transportation and rail support activities which may be relevant to Aurizon Network. However, the NAICS industry sector also includes a diverse range of other transportation activities. The proportion of companies within each transportation activity has not been advised and it is not possible to determine whether each transportation activity would have a similar cost structure. The relevancy of this benchmark data cannot, therefore, be ascertained.

3.80 The relevancy of the cross industry data sets also cannot be ascertained as there is no analysis in relation to the activities of the entities that comprise this data.

Consideration/explanation of outlying costs of comparable companies

3.81 In the results presented by Ernst & Young, there are a number of costs presented in relation to the comparable rail companies that are well above those of Aurizon Network, the other comparable rail company, or the cumulative industry costs as highlighted below.

		Benchmarks		
Ernst & Young Benchmarking report results	Allocated Costs $'000	Cumulative Industry $'000	Rail Company 1 $'000	Rail Company 2 $'000
Enterprise services - general counsel and company risk	7,372	2,225	1,896	11,810
Enterprise services - information technology	19,755	14,932	27,779	7,525
Business sustainability - enterprise real estate	4,980	4,600	16,733	4,600
Strategy	1,762	1,093	1,093	8,728
Board & CEO	2,115	3,157	-	5,974

Source: Ernst & Young - Benchmarking of Corporate Overhead Costs for Aurizon Network Operations - 22 January 2013

3.82 The Ernst & Young report contains no analysis as to the underlying reasons of these anomalous costs and the implications for the benchmarking exercise, in particular when comparing costs in total against Aurizon Network.

Non-benchmarked costs

3.83 Ernst & Young has not been able to benchmark costs of $4,117,000 (representing 6.49% of total costs) that are proposed to be allocated, as set out below.

Ernst & Young Benchmarking report results	Allocated Costs $'000
Enterprise services - non-benchmarked: national policy	861
Business sustainability - non-benchmarked	3,256
	4,117

Source: Ernst & Young - Benchmarking of Corporate Overhead Costs for Aurizon Network Operations - 22 January 2013

3.84 Therefore, whilst these costs may be relevant to the activities of Aurizon Network, the report does not consider whether the proposed allocation of these costs appears reasonable.

Consideration of Stakeholder Submissions

3.85 The increase in the corporate overhead component costs included in UT4 compared to UT3 has been raised as an issue in all of the submissions reviewed.

3.86 Specifically issues raised related to the following:

Use of stand-alone basis of allocation of corporate costs

3.87 Asciano has stated that it has concerns that Aurizon Network has been over-allocated Aurizon Holdings corporate costs through the use of stand alone cost allocations. Asciano has submitted that the cost allocation approach should recognise the reality that Aurizon Holdings is an integrated organisation with multiple operating divisions.

RSMBC comments

3.88 We concur with Asciano's submission that the allocation of corporate costs to Aurizon Network should recognise the current structure of Aurizon Holdings' and therefore Aurizon Network should share in any synergistic benefits arising from this structure.

3.89 We consider that the adoption of an appropriate allocation methodology of Aurizon Holding's total corporate overhead costs should capture a share of the synergistic savings derived from the centralised service structure.

Structure of Aurizon Network compared to Aurizon Holdings

3.90 BMA and BMC raised the issue that Aurizon Network's regulatory business is self-contained as well as geographically contained and coal centric, which is in contrast with the geographically diverse and multi-commodity, above rail business. Therefore in assessing the standalone costs of Aurizon Network, BMA/BMC submit that the relative simplicity of the CQCN business compared to the related above rail business, needs to be taken into account.

RSMBC comments

3.91 Any allocation methodology adopted for allocation of corporate overheads should reflect the utilisation of those corporate overheads. In the case of Aurizon Network, the utilisation of these functions would, in part, be influenced by the complexity and size of the respective operating businesses within Aurizon Holdings.

Corporate costs benchmarking

3.92 RTCA raised in its submission that the increasingly integrated nature of Aurizon Network's "corporate" function makes it difficult, if not impossible, to accurately identify where and how corporate costs are accounted for within its business. Benchmarking is, therefore, the only transparent and independent means of testing the efficiency and prudence of Aurizon Network's claim.

3.93 BMA/BMC also supported the use of benchmarking as an appropriate means of identifying efficient costs provided that the benchmark organisation is an appropriate and demonstrably efficient comparison.

3.94 RTCA has further submitted that the benchmarking approach undertaken by Ernst & Young appears to be subject to significant flaws, including the following:

- there appears to be considerable duplication and inefficiency in Aurizon Network's business and management structure, which is not reflected in other operators (including ARTC).
- corporate costs appear to be recovered from various parts and levels of Aurizon Network, such that it is not possible to accurately identify where or to what extent the actual costs claimed represent double recovery. This is not an issue addressed by Ernst & Young.
- the Ernst & Young study refers to other government-owned operators on a "no names" basis, which makes it impossible to properly test whether they represent appropriate and reasonable comparison firms for the purpose of benchmarking Aurizon Network.
- the choice of benchmarking parameters (e.g. track kilometres versus gross tonne kilometres) and benchmarking partners can support completely different conclusions on the efficiency of Aurizon Network.

3.95 QRC and BMA/BMC also both raised the issue that the benchmarking exercise undertaken by Ernst & Young was based on a limited sample of companies on a confidential basis and that the benchmarking makes no reference to the publicly available ARTC Hunter Valley coal structure.

RSMBC comments

3.96 RSMBC has undertaken a review of Aurizon Network's methodology for calculating corporate costs for below rail activities and for maintenance activities. As detailed in Section 10 of this report, other than the duplication of some depreciation costs, nor other duplications or double recovery was identified.

3.97 RSMBC identified a number of issues with the Ernst & Young benchmarking and concurs that the use of confidential information makes the relevancy of the comparison information difficult to assess. However, we also acknowledge that the availability of benchmark information is generally limited, and will often only be available on a confidential "no name" basis as has been the case in the benchmarking undertaken by RSMBC within this report.

3.98 RSMBC notes that Ernst & Young has made adjustments in the benchmarking methodology to account for overhead allocations made separately for maintenance and capital expenditure by normalising the benchmarked data, using revenue, on the basis of operating Aurizon Network's excluding maintenance costs.

Conclusion

3.99 Based on the issues identified above in relation to the Ernst & Young benchmarking exercise, we consider that the benchmark costs utilised to support Aurizon Network's proposed corporate cost allocation are likely overstated, primarily due to:

- the costs being normalised solely based on revenue;
- no allowance being made in the benchmarking for the synergistic benefits that Aurizon Network should benefit from as a result of forming part of a larger group with centralised overhead functions; and
- no allowance or explanation being made for outlying costs when assessing costs in total.

3.100 We agree with Aurizon Network's assertion that corporate overheads utilised in UT3 period were below the actual costs incurred by Aurizon Holdings in relation to management of Aurizon Network.

3.101 However, based on the preceding analysis, we consider that the use of an alternative cost allocation methodology (direct costs as a percentage of total direct costs) to allocate overheads for cost centres, where no clear cost driver can be determined, may be appropriate on the basis that:

- this is the most commonly adopted methodology in the regulatory environment;
- it is the primary methodology adopted by Energex, the company that Aurizon Network has identified as a comparable business.

3.102 However, we note that circa 59% of Aurizon Network's direct costs relate to energy costs, which may reduce the appropriateness of the direct cost methodology. However, we still consider that this methodology should be considered as part of QCA's determination process.

3.103 Utilising this methodology, and having regard for other matters identified in this section of our report, the corporate overheads to be allocated over the UT4 period would be as follows.

FY14 ($'m)	FY15 ($'m)	FY16 ($'m)	FY17 ($'m)
48.00	**49.80**	**51.61**	**53.37**

(in nominal dollars)

3.104 Should a blended rate methodology be adopted for allocating overheads for cost centres where no clear cost driver can be determined, we consider that it may be more appropriate to utilise direct costs rather than revenue as a component of that blended rate on the basis that:

- direct costs as a percentage of total direct costs is one of the most commonly adopted allocation methodologies in the regulatory environment; and
- a large proportion of Aurizon Network's revenue relates to the return on and the return of capital in relation to the value of the RAB. The utilisation of revenue would therefore appear to include reference to the value of Aurizon Network's assets twice.

3.105 Utilising this methodology, and having regard for other matters identified in the section of our report, the corporate overheads to be allocated over the UT4 period would be as follows:

FY14 ($'m)	FY15 ($'m)	FY16 ($'m)	FY17 ($'m)
58.00	**60.32**	**62.65**	**64.91**

(in nominal dollars)

3.106 Utilising Aurizon Network's proposed methodology, and having regard for other matters identified in the section of our report, the corporate overheads to be allocated over the UT4 period would be as follows:

FY14 ($'m)	FY15 ($'m)	FY16 ($'m)	FY17 ($'m)
64.11	**66.67**	**69.24**	**71.74**

(in nominal dollars)

3.107 RSMBC has benchmarked the revised UT4 2013/14 total operating expenses under the above cost allocation methodologies in section 10 of this report.

4. Task 3.2.1b – Review of Corporate Overhead Cost Allocation – Maintenance Costs

Scope

4.1 RSMBC has been requested by QCA to review the corporate overhead costs proposed by Aurizon Network in the UT4 maintenance submission.

4.2 The review includes undertaking an assessment of the estimate of Aurizon Network's maintenance services overheads report prepared by Deloitte Access Economics.

4.3 RSMBC has been requested to provide an opinion on the reasonableness of the overhead costs proposed by Aurizon Network.

Background

4.4 In its UT4 maintenance submission, Aurizon Network has included an amount (in real terms for the year ended 30 June 2012) of $12.09 million per annum in relation to corporate overhead and corporate services.

4.5 These costs includes the following functions:

- Office of the Chief Executive Officer and the Board;
- Legal Services;
- Finance Services;
- Human resources;
- Business strategy and planning (including safety standards)
- Information Systems
- Corporate services; and
- Office overheads.

4.6 The corporate cost figure of $12.09 million has been calculated using a combination of two pieces of work undertaken by Deloitte. Firstly a bottom-up cost build-up based on a hypothetical maintenance business delivering maintenance services of approximately $200 million and secondly a benchmarking exercise centred on regulated businesses.

4.7 The maintenance corporate costs have been isolated, and independently calculated from the remaining UT4 submission.

4.8 The proposed corporate cost figure equates to approximately 6% of the proposed maintenance services revenue of approximately $200 million.

4.9 An allowance of 5.75% on direct labour costs has been allowed for corporate overheads and working capital in the UT3 maintenance costs. Therefore, the proposed costs represent an increase on the previous regulatory period, with a separate allowance now proposed by Aurizon Network for working capital in addition to the $12.09 million corporate cost.

4.10 The Deloitte bottom up analysis estimated the following corporate overhead costs for Aurizon Network.

Bottom-up maintenance corporate overheads	Total Overhead Cost $' m
Office of the CEO and Board	2.01
Legal services	0.76
Finance services	1.88
Human resources	0.76
Business strategy and planning	0.60
Information systems	4.00
Corporate services	1.00
Office overheads	1.08
	12.09

Source: Deloitte Access Economics - Estimate of QR Network Maintenance Services Overheads, 1 November 2012

Costs expressed in 30 June 2012 real dollars

RSMBC Comments

4.11 RSMBC has undertaken a review of the report prepared by Deloitte to assess the reasonableness of the proposed costs.

4.12 The bottom up analysis undertaken has been based on the costs that would be incurred by Aurizon Network as a stand-alone maintenance provider.

4.13 This methodology ignores the fact that Aurizon Network is part of a larger group with centralised functional overheads. This centralised functional overhead structure has been adopted by Aurizon Holdings to derive cost savings.

4.14 Therefore, in assessing the reasonableness of the proposed corporate costs calculated by Deloitte, reference must be made to the total overhead costs of Aurizon Holdings, together with the corporate costs allocated to Aurizon Network as part of operating expenses for the UT4 period.

4.15 Each of the corporate overheads departments calculated in the Deloitte report is discussed below.

Office of the CEO and Board

4.16 A total cost of $2.01 million has been proposed based on:

Cost	Basis	$'m
CEO salary	Average salary for CEO's for mining service companies with revenues under $1 billion	1.12
Non-executive board members	Average number of board members and average salary for mining services companies of a similar size (5 x $117,000)	0.59
Executive assistant and administrative assistant	Average salary of $67,000 based on salary benchmarking	0.13
Consultancy	50 days of consultancy at $3,000 per day	0.15
Other expenses and travel	Estimated	0.02
Total		**2.01**

4.17 Given the size of Aurizon Network's maintenance operations, we consider that the use of mining services companies with companies with revenues under $1 billion may not be appropriate.

4.18 The average total CEO remuneration for the 2012 financial year for ASX listed companies with revenues of between $151 million and $450 million, was $698,000.[15]

[15] Source: Thomson Reuters 2013 Boardroom Remuneration Review

4.19 The average total non-executive director remuneration for the 2012 financial year for ASX listed companies with revenues of between $150 million and $251 million, was $73,000.[16]

4.20 Based on a CEO's salary of $698,000 and 5 non-executive board members earning $73,000, CEO and Board costs would be $1,063,000.

4.21 Furthermore, we consider that there are significant savings that can be derived from Aurizon Network forming part of a larger group.

4.22 Aurizon Holdings total annual costs for the office of the CEO and Board used to allocate costs used to allocate corporate cost to Aurizon Network amounted to circa $[redacted] million.

4.23 The proposed maintenance overhead proportion of total costs therefore amounts to [redacted]% of the total costs. This proportion appears high.

4.24 As a proportion of the total direct costs of Aurizon Holdings, actual maintenance costs for the year ended 30 June 2013 of $153 million[17], represents [redacted]% of Aurizon Holding's total costs of $[redacted] million (refer paragraph 3.61 – page 54).

4.25 Therefore, if CEO and Board costs were allocated on the basis of direct costs, the amount allocated to maintenance corporate costs would amount to circa $630,000.

4.26 We consider that this would be a more reasonable estimate of CEO and Board costs to be applied to maintenance overheads.

[16] Source: Thomson Reuters 2013 Boardroom Remuneration Review

[17] Source: Aurizon Network Pty Limited Financial Statements (Note 5)

Legal Services

4.27 A total cost of $0.76 million has been proposed based on:

Cost	Basis	$'m
Legal staff	5 legal staff with average salary of $131,000 per employee based on salary benchmarking.	0.66
Consultancy	20 days of consultancy at $5,000 per day	0.10
Total		**0.76**

4.28 In allocating Aurizon Holdings' corporate overheads to Aurizon Networks below rail activities, 100% of the costs relating to Aurizon Network's legal counsel division of circa $[redacted] million have been allocated to Aurizon Network.

4.29 From the information provided to date, it is not clear as to why a further cost of $660,000 in relation to 5 legal staff is required in relation to maintenance activities.

Finance Services

4.30 A total cost of $1.88 million has been proposed based on:

Cost	Basis	$'m
Finance staff	10 staff in finance services with an average salary of $121,000 per employee based on salary benchmarking	1.21
External audit services	Based on external audit fees of similar sized mining service companies	0.26
Internal audit fee	Based on Deloitte's internal expertise	0.18
Accounting and tax advice	Fees of similar sized mining service companies	0.23
Total		**1.88**

4.31 The above does not appear unreasonable.

Human Resources

4.32 A total cost of $0.76 million has been proposed based on:

Cost	Basis	$'m
HR staff	6 staff in human resources with an average salary of $126,000 per employee based on salary benchmarking	0.76
Total		**0.76**

4.33 The above does not appear unreasonable.

Business strategy and planning

4.34 A total cost of $0.6 million has been proposed based on:

Cost	Basis	$'m
Business strategy and planning staff	5 staff in business strategy and planning with an average salary of $120,000 per employee based on salary benchmarking	0.60
Total		**0.60**

4.35 The above does not appear unreasonable.

Information Systems

4.36 A total cost of $4.0 million has been proposed based on:

Cost	Basis	$'m
Information systems costs	An allowance based on 2% of the total costs of $200 million has been allowed based on analysis of IT costs as a proportion of total expenditure.	4.00
Total		**4.00**

4.37 Aurizon Holdings total IT costs as a percentage of total costs equates to circa 3.5%. On the basis that the maintenance division would be expected to have a lower requirement for IT than the operation of the above rail and below rail divisions a 2% allowance does not appear unreasonable.

Corporate Services

4.38 A total cost of $1.0 million has been proposed based on:

Cost	Basis	$'m
General management	General manager and administrative assistant with an average salary of $124,000 based on salary benchmarking	0.24
Office administration	5 staff in the division with an average salary of $64,000 per employee based on salary benchmarking	0.32
Corporate affairs	3 staff in the division with an average salary of $146,000 per employee based on salary benchmarking	0.44
Total		**1.00**

4.39 The above does not appear unreasonable.

Office overheads

4.40 A total cost of $1.08 million has been proposed based on:

Cost	Basis	$'m
Office rental	Based on estimated rental price of $577/sqm and 45 employees allocated 15sqm per person	0.39
Printing and stationery	Estimated at $1,200 per person	0.06
Phones and mobiles	Estimated at $1,100 per person	0.05
Cleaning	Estimated at $28/sqm based on desktop research	0.02
ASX Fees	Based on Deloitte estimate	0.15
Annual report	Based on Deloitte estimate	0.15
AGM	Based on Deloitte estimate	0.11
Miscellaneous expenses	Based on Deloitte estimate	0.15
Total		**1.08**

4.41 Whilst the above does not appear unreasonable for a stand-alone maintenance provider, we do not consider it appropriate to include a stand-alone cost for ASX fees, annual report preparation or the costs of an AGM. As part of a larger group, there will be savings in relation to these costs. However, we consider that these savings are unlikely to be material.

Revised costs based on analysis

4.42 On the basis of the analysis of the bottom up approach, we consider that a reasonable corporate cost allocation to maintenance is as set out below.

Bottom-up maintenance corporate overheads	Proposed Overhead Cost $' m	Revised Overhead Cost $' m
Office of the CEO and Board	2.01	0.63
Legal services	0.76	0.10
Finance services	1.88	1.88
Human resources	0.76	0.76
Business strategy and planning	0.60	0.60
Information systems	4.00	4.00
Corporate services	1.00	1.00
Office overheads	1.08	1.08
	12.09	10.05

Costs in 30 June 2012 real dollars

Benchmarking comparison undertaken by Deloitte

4.43 Deloitte included within its report a benchmarking of the proposed percentage of corporate costs to recent regulatory decisions.

Basis	Overhead cost as % of costs
ATRC (2005) - % of operating costs	12.0%
TPI (2011) - % of total costs	5.3%
WestNet (2009) - % of total cost	5.1%
Envestra (2011) - % of operating costs	5.5%

4.44 The recent regulatory decisions quoted by Deloitte have an average of 7.0% of total cost and a median of 5.4% of total cost.

4.45 The costs proposed by RSMBC above amount to circa 5.0% of maintenance costs, or 5.4% if $660,000 of legal costs were reallocated from the [redacted] million of network operation's legal costs included in the allocation to below rail operations.

4.46 Prima-facie, the benchmarking might indicate that the proposed costs are too low. However, we consider that the lower percentage of costs is reflective of the fact that Aurizon Network currently operates within a larger group with a centralised overhead function.

4.47 We further note that the costs proposed would be broadly consistent with those utilised within the UT3 maintenance costs of 5.75% (inclusive of a working capital allowance).

Consideration of Stakeholder Submissions

QRC – application of cost build up methodology

4.48 QRC has submitted that it supports the approach adopted in relation to calculation of maintenance costs by building up a cost structure for a hypothetical, standalone maintenance company with an annual revenue of approximately $200 million per annum to arrive at its approximate $12 million per annum corporate cost allocation.

4.49 However, QRC has questioned the application of the methodology to some of the corporate functions where costs have been allocated. The example raised by QRC questioned the requirement for legal team of 5 FTEs to manage the maintenance function.

RSMBC Comments

4.50 RSMBC has undertaken a review of the proposed maintenance corporate overhead costs. Adjustments have been proposed in relation to CEO and Board costs and legal costs, which is a specific example raised by QRC.

QRC – potential double counting

4.51 QRC also submitted that it is concerned about the potential double counting of corporate costs as a results of Aurizon Network allocating of corporate costs to system wide operating expenditure on the basis of a mix of revenue, assets and head count which potentially includes maintenance head count or costs.

RSMBC Comments

4.52 RSMBC has undertaken a review of the calculations of the allocation percentages applied in Aurizon Network's corporate cost allocation to ensure that the basis used (revenue, head count and costs) excluded maintenance and avoided double counting. No issues of duplication were noted.

BMA/BMC – potential duplication of costs in system wide and regional costs

4.53 BMA/BMC submitted that the maintenance corporate overhead charge has been provided based on a bottom up build-up of the corporate costs of a company of a similar size that delivers similar service without providing evidence that these costs are not included in the system-wide and regional cost build up.

RSMBC Comments

4.54 As part of sub-task 3.2.7 as set out in section 10, RSMBC has undertaken a review system-wide and regional cost build up to check that these costs are not duplicated in Aurizon Network's operating expenditure forecasts. No issues of duplication were noted.

Conclusion

4.55 Based on the analysis undertaken, RSMBC recommends that the corporate maintenance costs of $12.09 million per year in real terms proposed by Aurizon, be amended to $10.05 million per year in real terms (for the year ended 30 June 2012).

4.56 The proposed reductions are reflective of:

- Aurizon Network being part of a larger group with centralised functional overheads that will result in lower corporate overheads than a stand-alone entity; and
- corporate overheads (legal costs) allocated within Aurizon Network's proposed operating expenses.

5. Task 3.2.2 – Benchmarking of Cost of Insurance Premiums

Scope

5.1 RSMBC has been requested by QCA to benchmark the insurance costs proposed by Aurizon Network based on a commissioned report from Willis Australia Limited ("Willis") and provide an opinion on the reasonableness of the proposed costs in the context of the assumption that Aurizon Network operates as a stand-alone business.

5.2 As part of the above process, RSMBC has been requested by QCA to consider relevant submissions from QRC, Asciano, BMA and BMC and RTCA.

Background

5.3 Aurizon Holdings has a group insurance program that includes a number of different insurance policies, including coverage of the activities of Aurizon Network.

5.4 As a specific premium for Aurizon Network is not set out in these policies, Aurizon Network engaged Willis to provide an assessment of the annual insurance premium costs that would apply to Aurizon Network on a stand-alone basis for the following classes of insurance, specifically in relation to the CCQN.

5.5 Willis has provided costs for the following insurance risks:

- Industrial special risks – property and buildings and nominated rolling stock;
- Third part liability (General Liability);
- Directors and Officers Liability;
- Employment Practices Liability;
- Professional Indemnity; and
- Corporate Travel.

5.6 The conclusion based on the Willis report was that the following insurance costs for 2012/13 would apply to Aurizon Network.

Insurance Risk	Proposed Costs 2012/13 $'000
Industrial special risks	2,276
General liability	633
Directors and officers	291
Professional indemnity	27
Employment practices liability	3
Corporate Travel	3
Total	**3,233**

5.7 The above costs have then been adjusted for CPI based on the annual CPI increases for Insurance and Financial Services published by the Australian Bureau of Statistics as at 24 April 2012 of 4% per annum.

5.8 The industrial special risk premiums were further adjusted to account for the movement in rolling stock values based on the estimated capital expenditure provided by Aurizon Network to Willis for the period through to 2017.

5.9 The proposed insurance premiums for the UT4 period are as set out in the table below.

	2013 – 14 ($'000)	2014 – 15 ($'000)	2015 - 16 ($'000)	2016 - 17 ($'000)
Proposed Insurance Costs[18]	3,325	3,773	3,999	4,137

Costs in nominal dollars – inflated by 4% per annum and adjusted for forecast movements in rolling stock values

Work undertaken by RSMBC

5.10 RSMBC has benchmarked the two material insurance costs proposed by Aurizon Network in relation to industrial special risks and general liability.

5.11 As insurance costs and insurance premium details are not publicly available, to enable benchmarking, RSMBC approached a number of comparable entities (below rail operators) and requested, on a confidential no-names basis, details of each entities insurance policies.

[18] Source: Table 86 – Section 10.5.4.3 – Volume 3 2013 Draft Access Undertaking

5.12 It should be noted that the benchmarking undertaken is limited to the extent that the comparable entities will have different risk profiles based on each entities size, geography and insurance claims history. Information on these differences is not available to enable further analysis. Therefore, the benchmarking should be considered as indicative only.

5.13 RSMBC also obtained details of the group policies Aurizon Holdings holds and compared and assessed the reasonableness of the proposed insurance costs for Aurizon Network to the total insurance costs and insurance coverage of Aurizon Holdings.

RSMBC Comments

Benchmarking to comparable companies

5.14 Due to the sensitivity of insurance information, RSMBC was only provided insurance information from two of the comparable entities approached.

5.15 The comparable entities provided insurance cost information for the 2013/14 insurance period. Therefore, to benchmark against Aurizon Network's proposed 2012/13 costs we have deducted a CPI factor of 4% from the comparable entity costs provided.

5.16 A comparison of the insurance cover proposed by Aurizon Network for 2012/13 to the insurance cover of the comparable companies is set out below.

Industrial special risks

	Aurizon Network Proposed	Company A	Company B
Declared assets	Rolling stock - $189,000,000 Feeder stations - $560,000,000 Bridges - $379,000,000 Other - $97,000,000	Not provided	$5.4 billion gross replacement value
Policy Limit of Liability	$500,000,000 per occurrence	$100,000,000 per occurrence	$75,000,000 per occurrence
Deductible	Rolling stock - $100,000 on each and every loss; all other physical loss or damage - $250,000 on each and every claim	$2,500,000 on each and every loss	$1,000,000 on each and every loss
Annual premium	$2,276,277	$2,869,803	$1,115,000

5.17 Comparable company A's costs are 26.1% higher than those proposed by Aurizon Network with a lower policy limit and a higher deductible on each and every loss.

5.18 However, it should also be noted that the comparable company insurance policy includes insurance of assets for damage by weather. Aurizon Network has included a separate self-insurance cost of $820,000 in respect of weather damage in the UT4 proposal.

5.19 Inclusive of self-insurance costs, the comparable company costs are 7.3% below Aurizon Network's proposed costs. However, the coverage has a significantly lower policy limit and a significantly higher deductible.

5.20 Comparable company B's costs are 51% lower than those proposed by Aurizon Network. However, the policy limit is significantly lower at $75 million per occurrence, compared to $500 million per occurrence.

5.21 Based on this comparison, the costs proposed by Aurizon Network do not appear unreasonable.

General Liability

	Aurizon Network Proposed	Company A	Company B
Policy Limit of Liability	$350,000,000 per occurrence and in the aggregate in respect of product, pollution and bushfire liability	$250,000,000 per occurrence and in the aggregate in respect of product, liability	$375,000,000 per occurrence and in the aggregate in respect of product, liability
Deductible	$500,000 on each and every loss	$2,000,000 on each and every loss	$1,000,000 on each and every loss
Annual premium	$633,262	$3,032,433	$1,173,000

5.22 Company A's costs are 378.9% higher than those proposed by Aurizon Network with a lower policy limit and a higher deductible on each and every loss. We note that this higher cost may be the result of factors that we do have information for.

5.23 Company B's costs are 85.2% higher than those proposed by Aurizon Network with a slightly higher policy limit and a higher deductible on each and every loss.

5.24 Based on this comparison, the costs proposed by Aurizon Network appear to be reasonable.

Comparison to Aurizon Holdings' group insurance costs

5.25 Benchmarking of the proposed insurance costs to Aurizon Holdings' group costs is difficult due to the insurance structure of Aurizon Holdings.

5.26 For both industrial special risks and general liability insurance, in addition to a deductible for every loss, Aurizon Holdings has an aggregate deductible ($[redacted] for industrial special risks and $[redacted] for general liability).

5.27 The aggregate deductible effectively means that Aurizon Holdings self-insures for these policies for these amounts.

5.28 Aurizon Holdings has provided insurance cost and cover information for the 2013/14 insurance period. Therefore, to compare to Aurizon Network's proposed 2012/13 costs we have deducted a CPI factor of 4% from the comparable entity costs provided.

5.29 A comparison of Aurizon Holdings insurance cover to those proposed by Aurizon Network is set out below.

Industrial special risks

	Aurizon Network Proposed	Aurizon Holdings
Declared assets	Rolling stock - $189,000,000 Feeder stations - $560,000,000 Bridges - $379,000,000 Other - $97,000,000	[redacted]
Policy Limit of Liability	$500,000,000 per occurrence	
Deductible	Rolling stock - $100,000 on each and every loss; all other physical loss or damage - $250,000 on each and every claim	
Aggregate deductible	None	
Annual premium	$2,276,277	

5.30 The costs proposed by Aurizon Network represent [redacted]% of the cost of Aurizon Holdings policy plus the aggregate self-insured deductible.

General Liability

	Aurizon Network Proposed	Aurizon Holdings
Policy Limit of Liability	$350,000,000 per occurrence and in the aggregate in respect of product, pollution and bushfire liability	[redacted]
Deductible	$500,000 on each and every loss	
Aggregate deductible	None	
Annual premium	$633,262	

5.31 The costs proposed by Aurizon Network represent [redacted]% of the cost of Aurizon Holdings policy plus the aggregate self-insured deductible.

Consideration of Stakeholder Submissions

5.32 No stakeholder submissions were identified that were relevant to the scope of the review of the insurance costs provided by Willis.

Conclusion

5.33 Based on the analysis undertaken, the corporate insurance costs proposed by Aurizon Network do not appear unreasonable.

6. Task 3.2.3 – Review of Calculation of Mine Depreciation Profile

Scope

6.1 RSMBC has been requested by QCA to provide an opinion on the proposed change in the calculation of RAB depreciation based on the analysis of CQCN mine lives as discussed in section 6.4 of Volume 3 of the 2013 Draft Access Undertaking.

6.2 As part of the above process, RSMBC has been requested by QCA to consider relevant submissions from QRC, Asciano, BMA and BMC and RTCA.

Background

6.3 A proportion of the MAR calculation relates to a return of capital to Aurizon Network in relation to the capital cost of installing the CQCN infrastructure assets.

6.4 The mechanism to allow for this within the MAR calculation is an allowance for depreciation of assets over their estimated useful economic lives.

6.5 Estimated useful economic lives are calculated with reference to:

- the physical life of the asset; or
- the economic life of the asset, determined by the length of time that there will be demand for use of the asset that will provide a sufficient return on and return of capital.

6.6 In UT3, two approaches for depreciation that were adopted for assets included in the RAB prior to commencement of UT3 and assets included in the RAB within UT3:

Period	Depreciation Methodology
Prior to commencement of UT4	Straight line basis over the shorter of remaining physical or economic life, where economic life was capped at 50 years.
After commencement of UT4	Accelerated depreciation profile was applied reflecting straight line depreciation over a maximum 20 year life. This 20 year life was not a fixed term, but rather a rolling 20 year life such that, in the absence of any evidence of a material increase in asset stranding risk, assets which had their otherwise useful lives capped at 20 years in UT3 would be depreciated in UT4 on the basis of either their remaining physical life, or 20 years, whichever is the lesser.

6.7 For the UT4 period, Aurizon Network is proposing a change in the methodology for the calculation of depreciation such that all assets within the RAB are depreciated over a maximum life of 25 years. It is therefore proposed that all assets will be depreciated on a straight line basis over the remaining QCA endorsed physical life of the asset, except where the remaining physical life of the asset exceeds 25 years, in which case the remaining life of the asset is capped at 25 years.

6.8 Aurizon Network claims that the above change in methodology mitigates the asset stranding risk arising from the potential drop or cease in demand for rail haulage services within the CQCN that could result in Aurizon Network not fully recovering its capital investment in the CQCN infrastructure.

6.9 Aurizon Network states in its submission that the asset stranding risk is:

- asymmetric, that is, regulated businesses do not have upside revenue potential and therefore the risk is unavoidable and cannot be diversified away from the business; and
- not compensated in its WACC utilised to calculate the return on capital applied to in the calculation of the MAR.

6.10 The scope of RSMBC's review has not included a review of the methodology adopted in the calculation of Aurizon Network's WACC. We recommend that, in assessing any changes in depreciation methodology, QCA ensures that the methodology adopted in calculating Aurizon Network's WACC does not incorporate any element in relation to asset stranding risk (for example, the equity beta adopted only includes comparable entities that are not exposed to asymmetric asset stranding risk).

Methodology adopted by Aurizon Network in assessing economic life of CQCN infrastructure assets

6.11 Aurizon Network has based its assessment of the economic life of the CQCN on the weighted average lives of mines serviced by the CQCN.

6.12 Aurizon Network has:

- obtained the marketable reserves of mines within the CQCN as at 1 July 2013 (from Wood Mackenzie);
- extrapolated the marketable reserves of each mine over the UT4 period based on Aurizon Network's UT4 volume forecasts;
- from 1 July 2017, assumed annual production rates are equivalent to 90% of below rail contracted access rights until depletion of marketable reserves; and
- calculated the expected life of each mine based on the above information.

6.13 The 90% of below rail contracted access rights assumption as the basis for annual production rates is based on coal producers having executed take or pay contracts and not being expected to contract for capacity materially in excess of their production estimates (with a 10% buffer allowing for under railing relative to the contracted amount).

6.14 The mines referred to above have been grouped into three economic zones:

- Northern Bowen Basin (inclusive of Goonyella, Newlands and GAPE);
- Blackwater; and
- Moura.

6.15 Aurizon Network has calculated a weighted average mine life for each economic zone based on both:

- marketable reserves; and
- annual production.

6.16 Aurizon Network has then used the average of the two weighting methodologies.

6.17 Aurizon Network's rationale for using the average of the above two weightings is that both methods of weighting can be skewed by either short life mines with high production rates or long life mines with low production rates. The skewing of the weighted averages could result in either:

- arriving at too short an economic life which may lead to excessively high prices early, relative to the prices that would be expected to prevail later in the period; or
- arriving at too long an economic life such that the there is insufficient production volume in the latter years to support the full recovery of capital.

6.18 Aurizon Network has selected the weighted average life of mines as at 1 July 2016 to take into account the impact of all new mines coming on (commencing operations) during the regulatory period. The average life of mines at 1 July 2013 has then been calculated by adding 3 years to the 1 July 2016 average. The adoption of this methodology does not appear unreasonable.

6.19 Aurizon Network has not included any allowance for:

- any prospective mines that may commence production in the foreseeable future; or
- proven reserves (as opposed to marketable) of existing producing mines.

6.20 Aurizon Network has stated that the inclusion of either of the above in the assessment of the economic lives of the CQCN infrastructure assets would require Aurizon Network to take on exploration and development risk.

6.21 Based on the above analysis, the mine lives by zones (in years) calculated by Aurizon Network are as follows:

Economic Zone	Weighted by Reserves	Weighted by Production	Midpoint
Northern Bowen Basin	32.04	21.27	26.66
Blackwater	29.62	19.80	24.71
Moura	29.37	24.37	26.87

Work undertaken by RSMBC

6.22 RSMBC has undertaken a review of the average life of mine calculations produced by Aurizon Network and performed the following procedures:

- checked the mathematical accuracy of the calculation;
- checked the marketable reserves data to source documentation provided by Wood Mackenzie; and
- assessed the reasonableness of the proposed change in depreciation methodology adopted by Aurizon Network.

6.23 No issues were noted in relation to the review of the mathematical accuracy of the calculation or the data utilised in the calculation.

RSMBC Comments

6.24 We note that there are regulatory precedents for adopting a depreciation methodology to match the return of capital to the expected lives of the mines being serviced by rail infrastructure.

6.25 This methodology has been adopted in the calculation of the 2010 ARTC, Hunter Valley Coal Network Access Undertaking as well as the NSW Rail Access Undertaking.

6.26 It therefore does not appear unreasonable for Aurizon Network to adopt a similar depreciation methodology to mitigate the asset stranding risk (subject to this risk not being compensated for within the WACC calculation).

Prospective mines/proven resources

6.27 We note that Aurizon Network has made no allowance for prospective mines that may commence production in the foreseeable future or proven resources of existing mines.

6.28 As support Aurizon Network quotes[19] the ACCC Draft Decision in relation to the 2010 proposed Hunter Valley Coal Network Access Undertaking:

"In relation to new mines that are not yet in production and are highly uncertain, it does not seem inappropriate to exclude these mines from the mine life calculation as there is no guarantee there will ever come into production. To the extent these do come on line in future years, these could be considered in future mine life estimates."

6.29 However, its final decision in relation to the remaining mine lives for the NSW Rail Access Undertaking, IPART determined that prospective mines should be included in the remaining mine life [20]. The decision was based on a report by LECG which stated:

"LECG's report recommends that prospective mines be included in the assessment of the remaining mine life, with the effect of adding about 2.7 years to the estimate. LECG argues that prospective mines contribute to the expected mine life. It would be inappropriate to allocate these mines a probability of zero, instead of assessing a nonzero probability of the opening of such mines."

[19] 2013 Draft Access Undertaking Volume 3, p98

[20] IPART, *NSW Rail Access Undertaking – Review of rate of return and remaining mine life from 1 July 2009*, August 2009, p43 and p49.

6.30 We consider that the view taken by IPART in assessing the likely economic life of the CQCN infrastructure assets the non-inclusion of prospective mines is likely to understate the economic lives of these assets has some merit.

6.31 However, on a practical level, we consider that to attempt to probability weight the likelihood of prospective mines within the CQCR would be a complex and difficult exercise.

6.32 The UT4 period covers a period of 4 years which results in an opportunity to review the economic life of assets to take into account changes within the CQCR and the impact of prospective mines at the end of this period.

6.33 Therefore, given that the impact of prospective mines and new changes in marketable reserves can be taken into account at the end of the UT4 period, we do not consider the exclusion of prospective mines from Aurizon Network's mine lives calculation to be unreasonable.

Weighted average methodology

6.34 Aurizon Network's submission notes that the use of a weighted average mine life based on production volumes or marketable reserves could be skewed by outlying mines resulting in an average life that is either too short or too long. Aurizon Network has, therefore, utilised the average of the two weighting methodologies.

6.35 However, Aurizon Network's submission does not provide any analysis of the data used to demonstrate that the average of the two weighting scenarios is the correct methodology to be adopted.

6.36 The example given on page 95 of volume 3 of the 2013 Draft Access Undertaking is based on the following mine profile:

- Mine A has reserves of 30 million tonnes and a production rate of 1 mtpa;
- Mine B has reserves of 40 million tonnes and a production rate of 5 mtpa; and
- Mine C has reserves of 20 million tonnes and a production rate of 10 mtpa.

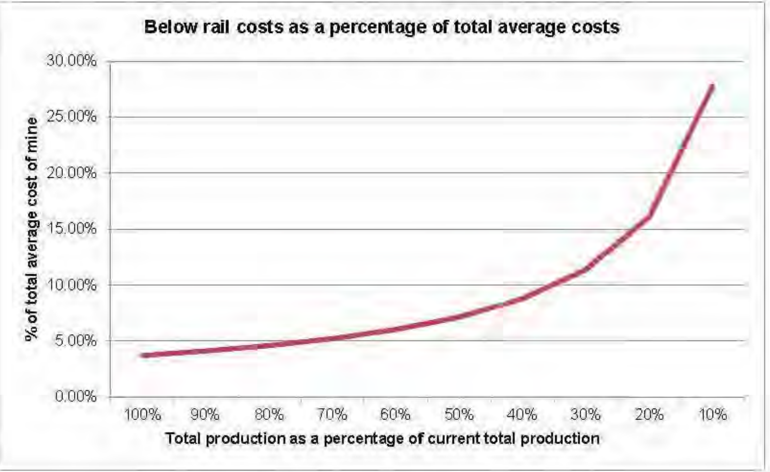
6.37 The above scenario resulted in total production being at insufficient levels to provide for full recovery of capital several years prior to the average mine life weighted by marketable reserves.

6.38 However, this result will not be applicable in all cases dependant on the production rates and marketable reserves of the mines being serviced by the rail infrastructure. The example used on page 95 of volume 3 of the 2013 Draft Access Undertaking is based on a small number of mines with each mine having a markedly different mine reserve and production rate profile.

6.39 We consider that an appropriate analysis to undertake is to chart the proposed return of capital depreciation profile against the estimated production profile over the mine lives for each economic region to assess whether the weighted average mine life under the marketable reserves weighting results in uneconomic position in the latter years due to the reduction in forecast production.

6.40 This analysis is set out in the following charts for each economic region.[21] The forecast production in each chart has been plotted as a percentage of the projected 2013/14 production levels to enable it to be plotted relative to the percentage of the 2013/14 RAB yet to be recovered based on both a straight line depreciation and assuming a 2% asset renewal rate (ignoring the impact of additional forecast capital expenditure above the 2% asset renewal rate over the UT4 period).

6.41 As set out in page on page 8 of volume 3 of the 2013 Draft Access Undertaking, below rail charges currently represent a small proportion (3.7%) of the total average cost of Queensland coal mine operations. Assuming that a fall in the total production of a region does not result in any reduction in the total costs of the below rail network, with all other things being equal, the impact of a reduction in production on the costs of below rail charges as a proportion of the total average cost of Queensland coal mine operations is set out below.

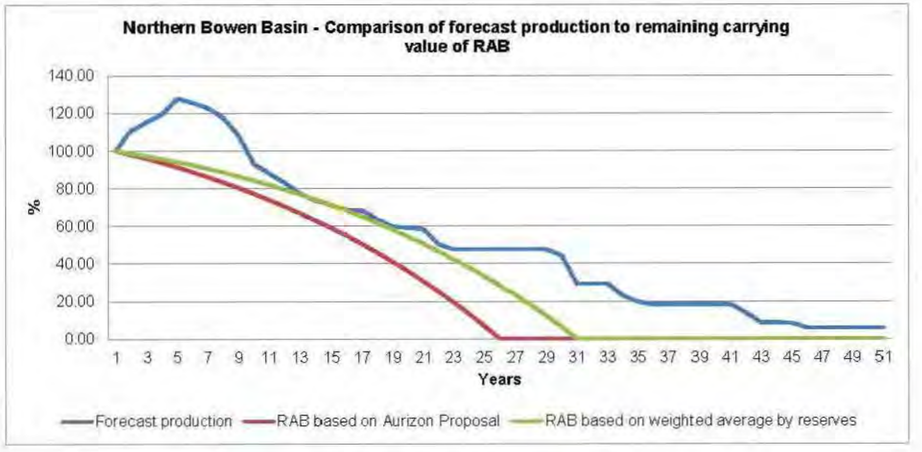


6.42 In reality, we would expect that there would be some reduction in below rail costs as a result of the reduction in total production of the Queensland coal mine operations and, therefore, a reduction in the overall volumes on the CQCN. Additionally, over time, there will also be a reduction in the return on assets being charged on assets within the RAB as a result of the reduction in the carrying value of the RAB from the return of capital.

6.43 In considering the analysis, it is important to note that the UT4 period covers a period of 4 years and therefore there are a number of opportunities to review the economic life of assets to take into account changes within the CQCR. The ability to review asset lives on a four yearly basis provides some asset stranding risk mitigation.

[21] Analysis based on Wood Mackenzie Coal Supply Service Australia Production and Reserves Report – November 2012

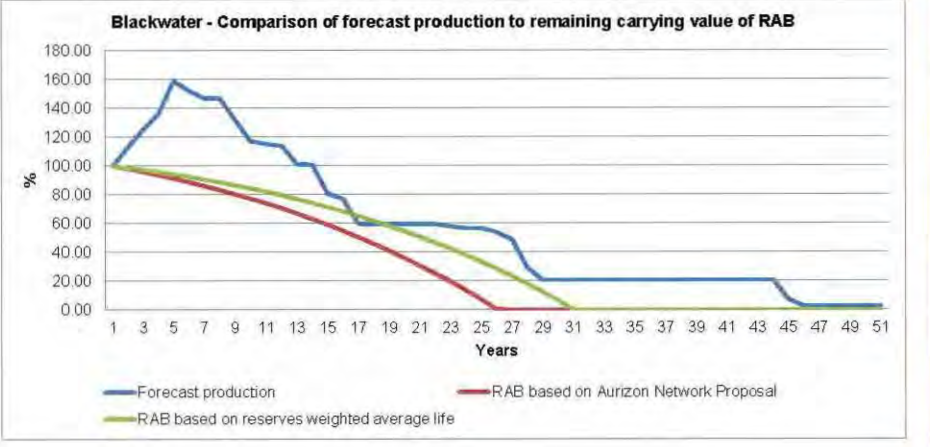
Northern Bowen Basin



6.44 As shown above, forecast production rates at the proposed terminal date of 25 years are forecast to be 47.5% of forecast production for 2013/14. Thereafter, the forecast production rates as a percentage of forecast production for 2013/14 falls as follows:

Year	Forecast Production % of 2013/14
25	47.5%
26	47.5%
27 (average weighted mine life based on mid-point of reserves and production rates)	47.5%
28	47.5%
29	47.5%
30	44.3%
31	29.3%
32 (average weighted mine life by reserves)	29.2%

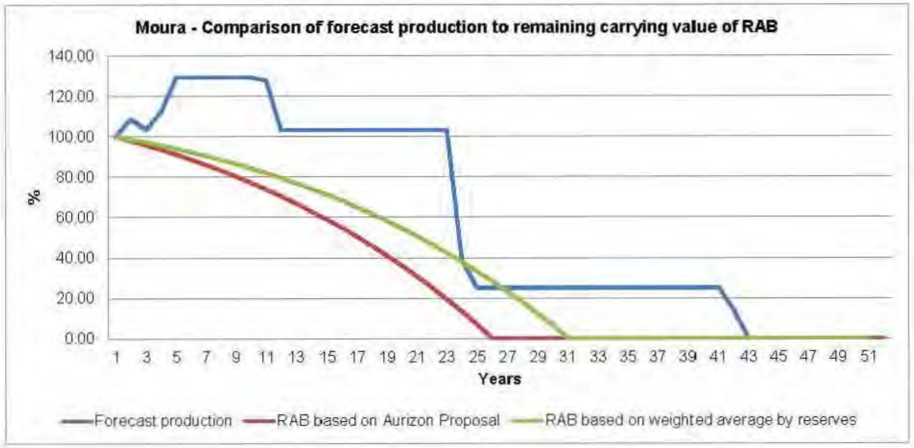
Blackwater



6.45 As shown above, forecast production rates at the proposed terminal date of 25 years are forecast to be 56.6% of forecast production for 2013/14. Thereafter, the forecast production rates as a percentage of forecast production for 2013/14 falls as follows:

Year	Forecast Production % of 2013/14
25 (average weighted mine life based on mid-point of reserves and production rates)	56.6%
26	53.8%
27	48.7%
28	29.0%
29	20.6%
30 (average weighted mine life by reserves)	20.6%

Moura



6.46 As shown above, forecast production rates at the proposed terminal date of 25 years are forecast to be 25.5% of forecast production for 2013/14 compared to 38.52% in the previous year. Thereafter, the forecast production rates as a percentage of forecast production for 2013/14 are as follows:

Year	Forecast Production % of 2013/14
25	25.5%
26	25.5%
27 (average weighted mine life based on mid-point of reserves and production rates)	25.5%
28	25.5%
29 (average weighted mine life by reserves)	25.5%

Consideration of Stakeholder Submissions

BMA/BMC

6.47 BMA/BMC has stated that adopting a uniform 25 year asset life for all assets in the RAB is at odds with the economic life of the coal industry in Central Queensland. BMA/BMC further states that its life of asset plans extend beyond 2070.

RSMBC Comments

6.48 The BMA/BMC submission does not provide any detail in relation to its life of asset plans. We are therefore unable to assess the reliance on these life of asset plans upon the discovery of further marketable reserves.

6.49 Based on the Wood Mackenzie Coal Supply Service Australia Production and Reserves Report – November 2012, the level of marketable reserves restrict the economic life of the CQCN. On the basis of this report, and on the basis that Aurizon Network is not compensated for the risk of additional marketable reserves being not being discovered and assets becoming stranded, we consider adoption of an amended maximum economic life of assets based on the mid-point of the average mine lives weighted by marketable reserves and production rates does not appear unreasonable.

6.50 In the event that there is a change in the level of reserves within the CQCN and the assessed economic lives of mines within the CQCN, the maximum economic life of assets can be reassessed within the next regulatory period to reflect this.

Conclusion

6.51 On the basis of the analysis above, RSMBC is of the opinion that the adoption of an amended maximum economic life of assets based on the mid-point of the average mine lives weighted by marketable reserves and production rates does not appear unreasonable.

6.52 The amended maximum economic life of assets for each economic region would therefore be (rounded):

- Northern Bowen Basin – 27 years;
- Blackwater – 25 years; and
- Moura – 27 years.

6.53 We note that Aurizon Network has proposed a maximum economic life of assets for all regions of 25 years which is inconsistent with the mid-point for the Northern Bowen Basin and Moura economic regions, as set out above.

Taxation implications

6.54 Aurizon Network has advised QCA that adjusting the assets lives for regulatory purposes to align them with the average life of the mines will not impact on the tax treatment of the assets, including the rate that they depreciate the assets for tax purposes.

6.55 Aurizon Network advised that:

- under Section 40-95 taxpayers can choose whether to apply an effective life[22] determined by the Commissioner of Taxation under section 40-100 or to self-assess an effective life under section 40-105. Aurizon Network generally chooses to apply the effective life determined by the Commissioner under section 40-100 (currently published by the Commissioner of Taxation in TR 2013/4);
- broadly, in determining the effective life of assets (either by the Commissioner under section 40-100 or by the taxpayer under section 40-105) it is necessary to consider the period that the asset can be used by any entity for a taxable purpose, assuming that the asset will be subject to wear and tear at a reasonable rate, the asset will be maintained in reasonably good order and condition and having regard to the period within which the asset is likely to be scrapped or abandoned (refer section 40-100(4) to (6) and section 40-105(1A) to (2));
- TR 2013/4 states that the Commissioner considers a number of factors in determining the period that an asset can be used by an entity for a taxable purpose including: physical life, manufacturing specifications/engineering information, use of the asset in different industries, industry standards, repairs & maintenance, retention period, obsolescence, scrapping or abandonment practices, lease periods, financial analysis and market value; and

[22] generally, the effective life of a depreciating asset is how long it can be used by any entity for a taxable purpose or for the purpose of producing exempt income or non-assessable non-exempt income

- based on the above, the Commissioner's published effective lives for railway infrastructure assets are generally 30 years for heavy haul track, although there are some specific assets which the Commissioner has determined have a shorter life (e.g. signalling). Aurizon Network has adopted these effective lives for the purposes of calculating its tax depreciation.

6.56 Aurizon Network advised that it considers that the UT4 weighted average life of the mine of 25 years is not acceptable to use as a reasonable estimate of the effective life of railway assets. This is on the basis that the assets (i.e. being the railway lines forming part of the CQCN) will be able to be used by Aurizon Network for a period beyond 25 years as longer life mines continue to operate and additional mines come online.

6.57 Furthermore, Aurizon Network advised that there ise no intention for the assets (i.e. CQCN) to be scrapped at the end of 25 years which is supported by industry practice which indicates that it is likely that the railway lines will have an asset life greater than 25 years. This situation can be contrasted with specific single mine infrastructure which may have a shorter effective life depending on the life of the mine.

6.58 Aurizon Network also noted that, from a regulatory perspective, the weighted average mine life is periodically reset. That is, the weighted average life is reset at each regulatory period based on the weighted average mine life at that time (which may be affected by new mines and changes in market conditions). For example in UT5, the weighted average mine life may be reassessed to be 25 years or even 30 years, depending on conditions at that time. Therefore, the regulatory mine life is not a proxy for the assets' effective life and will not be relevant in the determination of the tax effective life.

6.59 It was also noted that Aurizon Network uses the diminishing value method (usually 200%) for calculating depreciation. This significantly accelerates the depreciation claims which means the bulk of the cost of the assets would be depreciated within 25 years in any event.

RSMBC Comments

6.60 We have reviewed the above tax assessment provided by Aurizon Network, and concur that a weighted average mine life could not be relied upon to support a change in the effective life of a depreciating asset.

6.61 To self-assess the effective life of an asset, regard must be had to the intended use of the actual asset. If a particular CQCN infrastructure asset services a number of mines, the mine with the greatest mine life would be relevant in determining the effective life of the asset, unless there are other factors to support a shorter effective life than the mine life.

6.62 In agreeing with the tax assessment of Aurizon Network, we make the following additional comments in relation to the effective lives for tax purposes of the CQCN assets:

1) To the extent that any of the CQCN infrastructure assets service a single mine, it may be possible to self-assess the effective lives of those assets and link them to the economic life of that mine.

2) The Commissioner has determined that the effective life of signalling assets is 15 years, electrical overhead distribution lines 33 1/3 years, power transformers 30 years and substations 40 years.

3) Certain capital expenditure associated with projects carried on by taxpayers may be pooled and written off under Subdivision 40-I of the Income Tax Assessment Act 1997 ('ITAA 1997') on the basis of the project's life.

6.63 Capital expenditure captured by these provisions includes 'transport capital expenditure', being expenditure incurred in carrying on a business for a taxable purpose on a transport facility (refer section 40-865).

6.64 A 'transport facility' is defined to include a railway that is used primarily and principally for the transport of minerals or quarry materials obtained by any entity in carrying on mining operations (refer section 40-870).

6.65 These provisions will however only apply where the expenditure:

- does not form part of the cost of a depreciating asset that the taxpayer holds or is taken to have held;
- is not deductible under another provision of the income tax legislation; and
- is directly connected with carrying on of a business in relation to which transport capital expenditure is incurred.

6.66 Subdivision 40-I therefore effectively acts as a 'safety net' to capture capital expenditure that is transport capital expenditure not covered by other subdivisions of Division 40.

6.67 We note here that Taxation Ruling *TR 2013/4 - Income tax: effective life of depreciating assets* confirms that Trackwork (incorporating rails, sleepers, ballast, permanent way, integral bridges, culverts and tunnels) is a depreciating asset for division 40 purposes and therefore would not be eligible for inclusion in any 'transport capital expenditure' pool.

6.68 No analysis of the fixed asset register has been undertaken, however it is possible that Subdivision 40-I may apply to some expenditure incurred which would allow deductions for that expenditure to be claimed over the project's life.

6.69 The opinion provided only considers the calculation of the effective lives of the relevant assets and not the calculation of any potential project pool 'project lives'. The calculation of a project's life would require separate analysis

6.70 The potential issue arising from the tax lives of assets being longer than the economic lives on which the return of capital is based is that Aurizon Network will hold a deferred tax asset in relation to assets for which they have received a full return of capital.

6.71 However, given that the Aurizon Network generally uses the 200% diminishing value method for calculating tax depreciation, and the effective lives for railway infrastructure assets are generally 30 years or less, the value of any deferred tax asset derived from the difference between the tax lives of assets compared to the economic lives is unlikely to be of significant value.

6.72 Based on an effective life for tax of 30 years, after 25 years under the 200% diminishing method, 17.8% of an asset's original cost will remain undepreciated for tax purposes.

6.73 Based on an effective life for tax of 25 years, after 25 years under the 200% diminishing method, 12.4% of an asset's original cost will remain undepreciated for tax purposes.

6.74 Based on the current Australian Tax Rate of 30%, the difference in the value of the deferred tax asset associated with an asset after 25 years based on an effective life for tax of 30 or 25 years will equate to 1.62% of its original cost ((17.8% - 12.4%) x 30%)).

6.75 To the extent that these assets are still utilised to provide services to mines still in operation after the proposed maximum economic life, the increased deferred tax asset will be utilised to the benefit of these mine operators.

7. Task 3.2.4 – Benchmarking of Forecast Compliance Audit Costs

Scope

7.1 RSMBC has been requested by QCA to provide an opinion on the reasonableness of the forecast compliance audit fees included by Aurizon Network in the UT4 forecast operating expenditure.

7.2 As part of the above process, RSMBC has been requested by QCA to consider relevant submissions from QRC, Asciano, BMA and BMC and RTCA.

Background

7.3 Aurizon Network incurs compliance audit costs as a direct consequence of its compliance with the Access Undertaking. As part of the UT3 Undertaking, the QCA was able to request an audit of compliance of any matter under the undertaking provided it has reasonable grounds to do so.

7.4 Aurizon Network has proposed an amendment for the UT4 period to allow for an annual adjustment to System Allowable Revenue for the difference between actual and forecast compliance audit costs.

7.5 Aurizon Network has included an estimate in its forecast operating expenditure for compliance audit costs that will be subject to pass-through as set out below.

	2013 – 14 ($'000)	2014 – 15 ($'000)	2015 - 16 ($'000)	2016 - 17 ($'000)
Proposed Audit Fees[23]	254.5	260.8	267.4	274.1

(in nominal dollars. Inflated by CPI of 2.5% per annum)

[23] Source: Table 65 – Section 10.2.3.6 – Volume 3 2013 Draft Access Undertaking

7.6 The forecast compliance audit costs are based on costs previously incurred by Aurizon Network in the performance of its previous obligations.

Work undertaken by RSMBC

7.7 RSMBC has undertaken a review of the forecast compliance audit costs for Aurizon Network and undertaken the following procedures:

- compared actual historical compliance audit costs incurred during the regulatory periods ended 30 June 2013, 30 June 2012 and 30 June 2011 to forecast costs;
- assessed trends in historical costs, recurring compliance audits and one-off compliance audits;
- discussed with QCA the compliance audit requirements for the UT4 period;
- reviewed other regulated entity compliance audit costs where compliance audits are conducted on a regular basis and benchmarked audit costs to those proposed by Aurizon Network; and
- assessed the reasonableness of the assumptions of forecasted compliance audit costs proposed by Aurizon Network.

RSMBC Findings

7.8 We have reviewed a detailed listing of actual audit costs specific to Aurizon Network's Regulatory Audits incurred during the years ended 30 June 2012 and 30 June 2013 and forecast costs for the year ending 30 June 2014 (relating to the audit of the 30 June 2011, 2012 and 2013 years, respectively) to assess trends in costs. The historical audit costs incurred by Aurizon Network are as follows:

Invoice Year	2011-12 ($'000)	2012-13 ($'000)	Variance ($'000)	Variance (%)
Actual audit costs – excluding cost overruns	210.4[1]	231.2[1]	20.8	10%
Actual audit costs – including cost overruns	230.4	269.2	38.8	17%

[1] Excludes cost overruns of $20,000 and $38,000 for the 2010-11 and 2011-12 audit years (2011-12 and 2012-13 invoice years), respectively.

Invoice Year	2012-13 ($'000)	2013-14 ($'000)	Variance ($'000)	Variance (%)
Actual audit costs – excluding cost overruns	231.2[1]	254.5[2]	23.3	10%
Actual audit costs – including cost overruns	269.2	254.5[2]	(14.7)	(5%)

[1] Excludes cost overruns of $38,000 for the 2011 -12 audit year (2012-13 invoice year).
[2] Forecast 2013-2014 audit costs include CPI escalation of 2.5%.

7.9 The cost overruns noted for the 2010/11 and 2011/12 audit years of $20,000 and $38,000, respectively related to additional audit costs as a result to inefficiencies and additional audit costs to resolve issues that arose as part of the audits (as noted in an e-mail from Aurizon Network's auditors dated 17 January 2013).

7.10 The scope of work undertaken as part of the annual Regulatory Process during the year ended 30 June 2013 (relating to the audit of the 30 June 2012 period) included an audit of the following parts of the UT3 Access Undertaking:

- Financial Statement Audit (Clause 3.3.2);
- Management of Confidential Information (Clause 3.4);
- Decision Making Principles (Clause 3.5);
- Compliant Handling (Clause 3.6);
- Capacity Allocation (Clause 3.7 (a) (ii) (d) and (e));
- Quarterly Performance Reports (Clause 9.1); and
- Annual Performance Report (Clause 9.2.2).

7.11 In addition to the above, an additional one-off compliance audit during the year ending 30 June 2013 was undertaken in relation to Capital Expenditure and Maintenance Costs Reports to the QCA (Clauses 9.2.4 and 9.3.1 respectively).

7.12 Based on the above Regulatory Audits performed for the year ended 30 June 2013, the following audit costs were incurred by Aurizon Network:

Fees for QR Network Below Rail Regulatory Audit's	Period	Total Fee ($'000)
First progress fee	August 2012	40.0
Second progress fee	September 2012	80.0
Third progress fee	October 2012	35.1
Fourth progress fee	November 2012	25.3
Variation fee	February 2013	38.0
Below rail financial statements audit	September to November 2012	50.8
Total fees		**269.2**

7.13 The regulatory audit plan for the period ended 30 June 2013 to be undertaken and invoiced during the year ending 30 June 2014 is yet to be finalised. However QCA has indicated that the audit plan is expected to be consistent with the 30 June 2012 annual regulatory audit plan (undertaken and invoiced during the year ended 30 June 2013), with the exception of the addition of an audit of the access conditions register.

7.14 We have undertaken a review of proposed compliance audit costs against other RSMBC regulated clients (within energy and shipping and logistics) where compliance audits are conducted on a regular basis. The results of our review are set out below:

Industry	Total audit costs ($'000)
Energy	269.2
Energy	260.5
Shipping and logistics	204.5[1]

[1] Compliance audits were undertaken for the period ending 30 June 2009 and 30 June 2010. We have applied an adjusted CPI escalation of 2.4%, which is the average CPI % from March 2009 – June 2013.

7.15 Whilst the scope of regulatory compliance audits across different industries will vary, and the audit costs of those audits will vary accordingly, the above benchmarks give an indication of the general quantum of regulatory compliance audit costs experienced by regulated entities.

7.16 A comparison of Aurizon Network's proposed compliance audit costs to the above benchmark costs is set out in the chart below.

7.17 Aurizon Network's proposed forecast compliance audit costs are comparable to those of other regulated entities.

Consideration of Stakeholder Submissions

7.18 No stakeholder submissions were identified that were relevant to the scope of the review of the proposed compliance audit costs.

Conclusion

7.19 Based on the above, we consider that the forecast audit compliance costs proposed by Aurizon Network do not appear unreasonable on the basis that:

- whilst, excluding CPI, there is a 7.5% increase on the 2012/13 period actual invoiced audit costs, there is an expectation that the annual regulatory audit scope will be increased to include an audit of the access conditions register; and
- based on the costs incurred for the 2012-13 period, the proposed compliance costs for the UT4 period make allowance for one additional one off compliance audit per annum of a similar cost to the audit of the Capital Expenditure and Maintenance Costs Reports to the QCA as set out in paragraph 7.11.

7.20 We further note that the compliance audit costs are proposed to be part of a cost pass through arrangement such that Aurizon Network will ultimately only recover the actual compliance audit costs incurred.