

**AUSTRALIAN RAIL TRACK CORPORATION LTD**

**2008 INTERSTATE ACCESS UNDERTAKING**

**VARIATION TO SCHEDULE H TO INCORPORATE CAPITAL EXPENDITURE**

**1 JUNE 2012 – 30 JUNE 2018**

**SUPPORTING SUBMISSION**



**JANUARY 2012**

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# **1. Executive Summary**

Terms used in this supporting submission are as per the definitions in ARTC's 2008 Interstate Access undertaking (2008 IAU) unless otherwise obvious from the context.

## **1.1 Background & Context: Relevant development of the 2008 IAU**

The 2008 IAU was initially submitted by ARTC to the ACCC in June 2007 and accepted by the ACCC in July 2008. On the interstate rail network, revenue obtained by ARTC through access charges is not sufficient to recover the full economic cost of providing access to the network.

ARTC prescribes the level of investment to be undertaken on the Network (Capital Expenditure) at Schedule H of the 2008 IAU. The 2008 IAU also provides for ARTC to seek the approval of the ACCC to increase Capital Expenditure for any amount exceeding 20% of the amount prescribed in Schedule H in any one year<sup>1</sup>.

ARTC initially prescribed Capital Expenditure in the 2008 IAU for financial years 2006-07 to 2011-12 (Table 2).

The 2008 IAU provides that any Capital Expenditure incorporated in the annual roll forward of the RAB must be on a Prudent basis<sup>2</sup>.

As part of its assessment of the 2008 IAU, the ACCC conducted a high-level review of the Capital Expenditure program proposed by ARTC in Schedule H. The review focused on ARTC's processes for generating the scope, standard and cost of ARTC's proposed Capital Expenditure for the interstate network. The ACCC considered that a high-level review was appropriate as the network was not expected to approach the revenue ceiling during the term of the 2008 IAU. The ACCC therefore concluded that ARTC has commercial incentives to ensure that its Capital Expenditure is reasonable and Prudent because it is reliant on the realisation of increased market shares arising from increased capital investment to reduce its costs and improve its profitability. In this context ARTC has greater incentives to use, and invest in, capital efficiently.

ARTC supports the overall approach adopted by the ACCC in the circumstances which:

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<sup>1</sup> ARTC Interstate Access Undertaking (2008), clause 4.4(e).

<sup>2</sup> ARTC Interstate Access Undertaking (2008), clause 4.4(d).

- considered that a high-level review was appropriate as the network is not expected to approach the revenue ceiling during the term of the 2008 IAU;
- focussed on ARTC's processes for generating the scope, standard and cost of ARTC's proposed Capital Expenditure for the interstate network;
- recognised that ARTC has commercial incentives to ensure that its Capital Expenditure is reasonable and Prudent because it is reliant on the realisation of increased market shares arising from increased capital investment to reduce its costs and improve its profitability;
- recognised that there was a need to balance the expectation that network revenue will not approach the ceiling and ARTC's commercial incentives to engage in efficient Capital Expenditure with the likely effects of any inefficient capital investment on current and future access seekers and the public interest;
- recognised that there was not necessarily a requirement to assess Schedule H on a project-by-project basis, which was unlikely to provide substantial benefits to the ACCC's assessment of the 2008 IAU;
- did not include a detailed review of cost estimates using industry costing benchmarks or global book values and that this may be warranted only where ARTC approaches the revenue ceiling; and
- recognised that the reasonable and Prudent scope of Capital Expenditure is that which is appropriate given the geographic definition of ARTC's network and the forecast size of the market for above-rail services, does not include capital biases, is commercially sound and has been subject to effective consultation with relevant stakeholders.

Apart from largely completing the substantial investment program in relation to ARTC's North-South corridor over the last several years, the circumstances in which ARTC prescribes Capital Expenditure estimates for the period 1 July 2012 – 30 June 2018 are largely identical to the circumstances existing in 2008.

## **1.2 Development of 1 July 2012 – 30 June 2018 Capital Expenditure**

### **1.2.1 Overview of anticipated Investment Scope 1 July 2012 – 30 June 2018**

ARTC's anticipated Capital Expenditure scope for the period 1 July 2012 to 30 June 2018 is a combination of:

1. Expenditure on the Southern Sydney Freight Line (SSFL) and Advanced Train Management System (ATMS) development, which were anticipated in the 2008 Capital Expenditure proposal but which for various reasons have not yet been completed.
2. Projects not envisaged at the time of the 2008 Capital Expenditure proposal but which have subsequently arisen and been funded and which remain to be completed.
3. New investments which are anticipated to receive approval and funding during the period 1 July 2012 to 30 June 2018.

For the purposes of this application, approval is only being sought to vary the 2008 IAU to recognise the third category of this expenditure, i.e. new investments expected to be approved and funded up to 2018. The expenditure envisaged in 2008 but not yet completed, and projects not envisaged in 2008 but now underway, will both be dealt with separately in accordance with Clause 4.4(e) of the 2008 IAU when these projects have been finalised. Any other subsequent variances to Capital Expenditure incorporated in Schedule H of the 2008 IAU will also be dealt with in this manner.

#### *1.2.2 ARTC Investment Strategy Development Process*

ARTC aims to maintain a rolling strategy for infrastructure development to provide the framework for capital investment decisions. These infrastructure development strategies aim to both address emerging capacity bottlenecks and to identify opportunities for productivity enhancements. The key objectives are to ensure that volume growth is not constrained by capacity, and to deliver productivity improvements as early as possible when they are economically justified.

The approach to the development of each infrastructure strategy is tailored to the circumstances of that strategy. However, a number of themes are common to the strategies, including:

- forecast volume is based on detailed modelling of both existing and potential future traffic;
- the strategies are based on achieving market-driven outcomes;
- the strategies aim to facilitate integrated and long-term solutions;
- solutions are designed to achieve market outcomes at the lowest cost; and
- solutions are supported by appropriate modelling.

ARTC maintains a continuous dialogue with rail operators to help guide the development of its overall strategy. Specific discussions on investment strategy are held as appropriate, while drafts of investment strategies are usually circulated to operators for comment. Investment

strategies are generally released as consultation documents and feedback is welcomed, recognising that the strategies only provide the context for investment decision making and that individual projects will undergo further rounds of review and engagement with stakeholders before a final approval is granted.

Further detail in relation to ARTC's Investment Strategy Development Process is provided at section 3.2.

### *1.2.3 Project Governance and Delivery Process*

Projects identified through the strategy development process then follow a number of paths for further development depending on whether the project is to be internally funded, requires an equity injection from Government as ARTC's shareholder, or would be most appropriately funded through a Government grant.

Importantly though, all projects are now managed in accordance with ARTC's project management procedure, PP157 (confidential Annexure 1). PP157 provides a structured and scalable control process for projects from inception to close-out. Projects are managed on the basis of a six phase process with approval gates at the commencement of each phase and a hierarchy of oversight. Controls ensure that for each level of the project team, the next level up has a means of:

- monitoring progress;
- reviewing plans and options;
- detecting problems;
- initiating corrective action; and
- authorising further work.

Significantly in this context, PP157 requires close attention to the proper definition of project objectives, assessment of options to achieve those objectives and financial analysis to support the recommended solution.

Financial analysis is undertaken in accordance with ARTC's Project Evaluation Procedure, FSFS067 (confidential Annexure 2), which gives primacy to the net present value calculation of the project from the company's perspective.

Further detail in relation to ARTC's Project Governance and Delivery Process is provided at section 3.2.

#### 1.2.4 Summary of Projects

A summary of projects in relation to each of the categories prescribed earlier in this section is provided at section 3.4.

Of particular importance in relation to projects that were not envisaged in 2008 and are currently underway is that, in the period since 2008, there have been three rounds of major investment initiatives on the interstate network being:

- In late 2008, ARTC received equity funding from the Australian Government to support a range of projects as an economic stimulus in response to the global financial crisis. These projects were ultimately progressed under the 'Nation Building' banner. The projects were a combination of projects that had been part of the North-South Strategy (previously developed in consultation with stakeholders) but which had not been completed, projects identified in the strategy development process but not at that time funded, and projects that arose as a result of then recent additions to the ARTC network.
- In the 2010 Australian Government budget a further round of projects, funded through a further equity injection, were announced. These projects were to some extent a follow-on to the first round of economic stimulus expenditure. This round of investment had a particular focus on productivity benefits and is generally known as the 'Productivity Package'.
- In 2007, the Australian Government announced that it would make available \$840m for projects to facilitate freight movements between Sydney and Newcastle. This program is generally known as the Northern Sydney Freight Works (NSFW). The overwhelming majority of the works are on the RailCorp owned track between North Strathfield and Broadmeadow and the funding is being made available directly to NSW for these projects. However, one project has since been identified on the ARTC network and is being funded by a grant to ARTC.

It is important to note that both the stimulus funding under the Nation Building package and the subsequent Productivity Package funding were provided to ARTC as equity by the Australian Government as ARTC's shareholder. As such, there was a clear understanding that the investments enabled by these equity injections were expected to earn a return on the equity invested.

It should also be noted that these two equity injections were made under unusual circumstances and there were both time and Government process constraints that limited ARTC's ability to formally consult with operators. As a result, ARTC relied on past consultation with operators on the general direction of future investment and informal discussions on

potential operational benefits of investment options. In particular, ARTC consulted extensively with PN and QRN on both the North-South Strategy investment and in the context of a joint ARTC / PN / QRN submission to Infrastructure Australia, while ARTC also benefited from a broader input through the Freight Rail Operators Group on a preferred list of projects for potential 'Auslink 2' funding.

As described earlier, variations to prior forecasts in Schedule H will be dealt with at a later time in accordance with Clause 4.4(e) of the 2008 IAU.

Finally, ARTC maintains a small program of corridor capital works. These projects generally relate to items that are life expired and require renewal but which in the process of renewal are upgraded to a modern equivalent standard, enhancing their capability in the process.

### **1.3 Variation of the 2008 IAU - 1 July 2012 – 30 June 2018 Capital Expenditure in the form of an extended Schedule H**

ARTC seeks to vary Schedule H of the 2008 IAU in order to incorporate indicative forecasts of Capital Expenditure for the period 1 July 2012 to 30 June 2018 as shown in Table 1 below.

Consequential amendments are also sought which include the removal of clause 2.4(c), which is no longer necessary, and subsequent re-numbering of clause 2.4.

ARTC incorporated indicative forecasts of Capital Expenditure for the period 2006-07 to 2011-12 into Schedule H of the 2008 IAU based on the best information available to ARTC at that time. The substantial investment program undertaken by ARTC since 2006-07 has changed and expanded significantly. New projects that were not anticipated in 2008 have since been funded and projects forecasted in 2008 have changed and/or been expanded due to funding being made available. Some of these new, changed or expanded projects are still being completed.

It is ARTC's intention to seek to vary the Capital Expenditure in accordance with Clause 4.4(e) of the 2008 IAU in due course, once the substantial investment program for the 2006-2012 period, currently being undertaken, has been completed.



**TABLE 1**

Segment/Activity	Estimated Expenditure					
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
<b>1. Adelaide (Dry Creek) - Parkeston</b>						
Improvement Project Works	14,000	54,825	40,825	-	-	-
ATMS Roll-out	-	-	36,200	36,962	-	-
Corridor Infrastructure Investment	5,754	6,189	6,591	6,321	6,399	6,399
<b>Total Capital Expenditure</b>	<b>19,754</b>	<b>61,014</b>	<b>83,616</b>	<b>43,283</b>	<b>6,399</b>	<b>6,399</b>
<b>2. Adelaide (Dry Creek) – Melbourne (Spencer Street)</b>						
Improvement Project Works	-	-	-	-	-	50,000
ATMS Roll-out	-	-	-	17,338	45,300	38,225
Corridor Infrastructure Investment	2,443	2,628	2,799	2,684	2,717	2,717
<b>Total Capital Expenditure</b>	<b>2,443</b>	<b>2,628</b>	<b>2,799</b>	<b>20,022</b>	<b>48,017</b>	<b>90,942</b>
<b>3. Melbourne (Tottenham) - Macarthur</b>						
Main South Track Improvement Works	-	-	-	100,000	100,000	50,000
Train Control Consolidation - South	-	-	-	-	-	-
Corridor Infrastructure Investment	4,511	7,560	4,600	6,410	6,353	6,353
<b>Total Capital Expenditure</b>	<b>4,511</b>	<b>7,560</b>	<b>4,600</b>	<b>106,410</b>	<b>106,353</b>	<b>56,353</b>
<b>4. Newcastle (Islington Junction via mains) – Queensland Border (Border Tunnel)</b>						
North Coast Track Improvement Works	-	-	-	-	-	-
North Coast Signals/Train Control Improvement Works	-	-	-	-	-	-
Northern Train Control Consolidation (allocation)	-	-	-	-	-	-
ATMS Roll-out	-	-	-	-	-	7,075
Corridor Infrastructure Investment	1,949	3,267	1,988	2,770	2,746	2,746
<b>Total Capital Expenditure</b>	<b>1,949</b>	<b>3,267</b>	<b>1,988</b>	<b>2,770</b>	<b>2,746</b>	<b>9,821</b>
<b>5. Crystal Brook – Parkes</b>						
Western NSW Improvement Works	14,000	21,000	-	-	-	-
Corridor Infrastructure Investment	3,082	3,314	3,530	3,385	3,427	3,427
<b>Total Capital Expenditure</b>	<b>17,082</b>	<b>24,314</b>	<b>3,530</b>	<b>3,385</b>	<b>3,427</b>	<b>3,427</b>
<b>6. Cootamundra – Parkes</b>						
Corridor Infrastructure Investment	569	612	651	625	632	632
<b>Total Capital Expenditure</b>	<b>569</b>	<b>612</b>	<b>651</b>	<b>625</b>	<b>632</b>	<b>632</b>
<b>7. Adelaide (Dry Creek) – Pelican Point</b>						
Corridor Infrastructure Investment	57	61	65	62	63	63
<b>Total Capital Expenditure</b>	<b>57</b>	<b>61</b>	<b>65</b>	<b>62</b>	<b>63</b>	<b>63</b>
<b>8. Port Augusta – Whyalla</b>						
Corridor Infrastructure Investment	216	232	247	237	240	240
<b>Total Capital Expenditure</b>	<b>216</b>	<b>232</b>	<b>247</b>	<b>237</b>	<b>240</b>	<b>240</b>
<b>9. Moss Vale – Unanderra</b>						
Corridor Infrastructure Investment	198	332	202	282	279	279
<b>Total Capital Expenditure</b>	<b>198</b>	<b>332</b>	<b>202</b>	<b>282</b>	<b>279</b>	<b>279</b>
<b>Network (allocation)</b>						
Track Investment (eg Wayside Detection, Wagons, Plant & Equipment)	-	-	-	-	-	-
Signals & Train Control Investment	-	-	-	-	-	-

(ATMS Concept)						
Communications Investment (eg 3G 850, NTCS, ICE)	-	-	-	-	-	-
<b>Total Capital Expenditure</b>	-	-	-	-	-	-
<b>Other</b>						
Southern Sydney Freight Line	-	-	-	-	-	-
<b>Total Capital Expenditure</b>	-	-	-	-	-	-

## **2. Relevant Development of ARTC's 2008 Interstate Access Undertaking**

### **2.1 RELEVANT 2008 IAU DEVELOPMENT**

The 2008 IAU was initially submitted by ARTC to the ACCC in June 2007 and accepted by the ACCC in July 2008.

The 2008 IAU covers that part of the interstate rail network which is managed by ARTC and has a term of 10 years. On the interstate rail network, revenue obtained by ARTC through access charges is not sufficient to recover the full economic cost of providing access to the network with assets valued on a depreciated optimised replacement cost basis and based on a regulated return of 11.76% post tax nominal. This is because interstate rail competes with both road and sea transport on many of the interstate corridors and the price/service offerings of these modes places a constraint on rail access pricing.

As a result, ongoing investment in the interstate rail network is unable to be funded on a commercial basis, through access charges from rail users.

By prescribing the level of investment (Capital Expenditure) at Schedule H of the 2008 IAU, ARTC sought approval from the ACCC to incorporate that Capital Expenditure in the annual roll forward of the regulatory asset base (RAB) for each Segment. The 2008 IAU also provides at clause 4.4(e) for ARTC to seek ACCC approval to increase Capital Expenditure for any amount exceeding 20% of the amount prescribed in Schedule H in any one year.

### **2.2 1 JULY 2008 – 30 JUNE 2012 PROPOSAL**

ARTC initially prescribed Capital Expenditure in the 2008 IAU for financial years 2006-07 to 2011-12 (Table 2 below).

**TABLE 2**

Segment/Activity	Estimated Expenditure					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
<b>1. Adelaide (Dry Creek) – Parkeston</b>						
Improvement Project Works	597	1,629	1,913	1,913	1,913	-
Corridor Infrastructure Investment	9,476	10,151	10,313	10,243	10,363	10,563
<b>Total Capital Expenditure</b>	<b>10,073</b>	<b>11,779</b>	<b>12,226</b>	<b>12,156</b>	<b>12,276</b>	<b>10,563</b>
<b>2. Adelaide (Dry Creek) – Melbourne (Spencer Street)</b>						
Improvement Project Works	7,756	42,966	7,049	1,913	1,913	-
Corridor Infrastructure Investment	7,270	7,222	4,205	4,205	3,364	4,310
<b>Total Capital Expenditure</b>	<b>15,026</b>	<b>50,189</b>	<b>11,254</b>	<b>6,118</b>	<b>5,277</b>	<b>4,310</b>
<b>3. Melbourne (Tottenham) – Macarthur</b>						
Main South Track Improvement Works	118,322	300,807	194,873	-	-	-
Train Control Consolidation - South	48,852	5,691	-	-	-	-
Corridor Infrastructure Investment	6,783	11,586	2,330	2,082	2,405	2,170
<b>Total Capital Expenditure</b>	<b>173,957</b>	<b>318,084</b>	<b>197,203</b>	<b>2,082</b>	<b>2,405</b>	<b>2,170</b>
<b>4. Newcastle (Islington Junction via mains) – Queensland Border (Border Tunnel)</b>						
North Coast Track Improvement Works	80,266	125,752	27,799	728	-	-
North Coast Signals/Train Control Improvement Works	2,447	-	-	-	-	-
Northern Train Control Consolidation (allocation)	8,754	2,834	4,279	-	-	-
Corridor Infrastructure Investment	12,914	13,271	5,796	7,880	6,461	5,987
<b>Total Capital Expenditure</b>	<b>104,381</b>	<b>141,857</b>	<b>37,874</b>	<b>8,608</b>	<b>6,461</b>	<b>5,987</b>
<b>5. Crystal Brook – Parkes</b>						
Western NSW Improvement Works	8,834	9,986	- 417	-	-	-
Corridor Infrastructure Investment	3,569	3,775	2,166	4,256	3,723	1,616
<b>Total Capital Expenditure</b>	<b>12,403</b>	<b>13,760</b>	<b>1,749</b>	<b>4,256</b>	<b>3,723</b>	<b>1,616</b>
<b>6. Cootamundra - Parkes</b>						
Corridor Infrastructure Investment	1,771	783	3,660	2,807	1,399	970
<b>Total Capital Expenditure</b>	<b>1,771</b>	<b>783</b>	<b>3,660</b>	<b>2,807</b>	<b>1,399</b>	<b>970</b>
<b>7. Adelaide (Dry Creek) – Pelican Point</b>						
Corridor Infrastructure Investment	23	-	-	-	-	-
<b>Total Capital Expenditure</b>	<b>23</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>8. Port Augusta – Whyalla</b>						
Corridor Infrastructure Investment	-	50	50	-	-	-
<b>Total Capital Expenditure</b>	<b>-</b>	<b>50</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>9. Moss Vale - Unanderra</b>						
Corridor Infrastructure Investment	337	494	117	876	766	738
<b>Total Capital Expenditure</b>	<b>337</b>	<b>494</b>	<b>117</b>	<b>876</b>	<b>766</b>	<b>738</b>
<b>Network (allocation)</b>						
Track Investment (eg Wayside Detection, Wagons, Plant & Equipment)	2,520	2,558	-	5,677	5,722	-
Signals & Train Control Investment (ATMS)	552	13,940	20,351	32,053	-	-
Communications Investment (eg 3G 850, NTCS, ICE)	3,670	28,330	17,920	-	-	-
<b>Total Capital Expenditure</b>	<b>6,742</b>	<b>44,828</b>	<b>38,271</b>	<b>37,729</b>	<b>5,722</b>	<b>-</b>
<b>Other</b>						
Southern Sydney Freight Line	3,464	94,518	143,651	-	-	-
<b>Total Capital Expenditure</b>	<b>3,464</b>	<b>94,518</b>	<b>143,651</b>	<b>-</b>	<b>-</b>	<b>-</b>

In most Segments, ARTC separately identified ongoing corridor infrastructure investment (asset renewals/replenishment) from enhancement/improvement works, with major investment programs separately identified. ARTC has also separately shown investments that are not identifiable with a particular Segment and are network wide in nature.

Capital Expenditure prescribed in Schedule H was qualified in the 2008 IAU as follows:

*'Forward years show annual indicative investment expenditure based on preliminary forecasts and are subject to adjustment in scope and cost.'*<sup>3</sup>

As stated earlier, the 2008 IAU also provides (at clause 4.4(e)) for ARTC to seek ACCC approval to increase Capital Expenditure for any amount exceeding 20% of the amount prescribed in Schedule H in any one year.

ARTC incorporated in Schedule H of the 2008 IAU indicative forecasts of Capital Expenditure for the period 2006-07 to 2011-12 based on the best information available to ARTC at that time.

Throughout the 2006-2012 period, the scope, nature and timing of the works undertaken by ARTC as part of this substantial investment program has changed significantly, consistent with the needs and objectives in relation to improving the competitiveness of interstate rail freight transport, and the more general stimulus of the Australian economy, held by ARTC's shareholders. New projects that were not anticipated in 2008 have since been funded and projects forecasted in 2008 have changed and/or been expanded due to additional funding made available. Some of these new, changed or expanded projects are still being completed.

It is ARTC's intention to seek to vary Capital Expenditure in accordance with Clause 4.4(e) of the 2008 IAU in due course once the substantial investment program for the 2006-07 to 2011-12 period, currently being undertaken, has been completed. ARTC is doing this for the following reasons.

- To seek such variations to Capital Expenditure when all projects undertaken as part of ARTC's investment program are completed, and have been finalised from a financial perspective, results in a more certain and efficient process, avoiding the need for further variation where incomplete projects are then completed. As such, variations can be presented for approval by the ACCC under Clause 4.4(e) of the 2008 IAU as a comprehensive package.
- There is no prescribed time period in which such variations to Capital Expenditure are required under Clause 4.4(e) of the 2008 IAU.

See section 3.1 and 3.4 of this submission for further details.

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<sup>3</sup> ARTC Interstate Access Undertaking (2008), Schedule H.  
Interstate Access Undertaking – Schedule H Variation

## 2.3 ACCC ASSESSMENT

The 2008 IAU provides that any Capital Expenditure incorporated in the annual roll forward of the RAB must be on a Prudent basis<sup>4</sup>. To be considered Prudent, any capital or renewals project must be identified, and expenditure incurred, having regard to:

- ‘(a) the need to meet market demand for capacity and performance of the Network, or the need to extend the economic life of the Network;*
- (b) whether the scope of works is consistent with that identified in the applicable ARTC Corridor Strategy current as at the Commencement Date or as varied from time to time;*
- (c) what is considered to represent an efficient means to achieve that demand or extend that economic life;*
- (d) what is consistent with existing standard and configuration of adjacent and/or existing infrastructure with similar utilisation and market requirements, or its modern engineering equivalent;*
- (e) expenditure incurred efficiently in implementing the project, in the context of prevailing access and operating requirements, and input costs;*
- (f) adjustments in relation to the timing of commencement and/or commissioning of projects; and*
- (g) support by the industry;<sup>5</sup>*

In relation to its review of Capital Expenditure prescribed at Schedule H of the 2008 IAU, the relevant views expressed by the ACCC are set out in its Draft Decision<sup>6</sup> and have been incorporated below. The ACCC ultimately concluded “*that the cost estimates in Schedule H do not raise concerns under Part IIIA.*”

### 2.3.1 Methodology

*‘The ACCC conducted a high-level review of the capital expenditure program proposed by ARTC in Schedule H. The review focussed on ARTC’s processes for generating the scope, standard and cost of ARTC’s proposed capital expenditure for the interstate network. The ACCC considers that a high-level review is appropriate as the network is not expected to approach the revenue ceiling during the term of the Undertaking. Therefore, ARTC has commercial incentives to ensure that its capital expenditure is reasonable and prudent because it is reliant on the realisation of increased market shares arising from increased*

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<sup>4</sup> ARTC Interstate Access Undertaking (2008), clause 4.4(d).

<sup>5</sup> ARTC Interstate Access Undertaking (2008), clause 9.1.

<sup>6</sup> ACCC Draft Decision, Access Undertaking – Interstate Rail Network, Australian Rail Track Corporation, April 2008, p199.

*capital investment to reduce its costs and improve its profitability. This may mean that ARTC has greater incentives to use, and invest in, capital efficiently.*

*However, some scrutiny of ARTC's capital investment is appropriate. It is anticipated that approved capital expenditure will be rolled into ARTC's regulatory asset base and therefore, there is the potential for such expenditure to affect future access prices. Consequently, regardless of whether the network will approach the revenue ceiling during the term of this Undertaking, the proposed capital expenditure program outlined in Schedule H may raise concerns under Part IIIA (particularly ss.44ZZA(3)(b) and (c)).*

*Furthermore, rail infrastructure is predominantly comprised of sunk assets. While some future capital expenditure may be directed at Greenfield projects, a majority is to improve the capacity or extend the life of existing infrastructure. These assets may not represent investments that would be considered efficient today and there is a potential concern that, even if revenue does not approach the ceiling, future capital expenditure should not exacerbate previous inefficiencies in rail investment. For example, capital expenditure on concrete re-sleepering of existing track segments may not be efficient in the long-term if the track configuration is inherently inefficient and these segments should be closed. Such inefficiencies can impose unnecessary costs on above-rail operators. In this respect, there is a need to balance the expectation that network revenue will not approach the ceiling and ARTC's commercial incentives to engage in efficient capital expenditure with the likely effects of any inefficient capital investment on current and future access seekers and the public interest.*

*While these issues indicate that an assessment should be made of ARTC's capital expenditure, there is not necessarily a requirement to assess Schedule H on a project-by-project basis. The ACCC's concern is that the processes and criteria adopted by ARTC to decide and implement its capital expenditure program should be reasonable and prudent. If these processes are reasonable and prudent, they should promote efficient investment in and use of, the network. The ACCC has therefore conducted a high-level review of the underlying processes and criteria used internally by ARTC, rather than reviewing the specific details on a contract by contract basis of individual capital expenditure projects.*

*In addition, the ACCC considers that an assessment of each individual project in ARTC's proposed capital expenditure program would be impractical given the time provided to assess the Undertaking and would unnecessarily impose costs on ARTC by requiring it to providing a large amount of detailed information to support the ACCC's assessment.*

*Finally, the ACCC notes that while submissions have raised concerns with ARTC's capital expenditure, these concerns have not identified issues with individual projects. Subsequently, an assessment of ARTC's capital expenditure on a project-by-project basis is unlikely to provide substantial benefits to the ACCC's assessment of the Undertaking.*

*Consequently, the ACCC considers that a high-level approach to assessing ARTC's capital expenditure is appropriate in regard to the interstate network covered by the December Undertaking. This assessment involved examination of ARTC's decision making processes for the planning and commissioning of investment, including whether the processes are designed to ensure reasonable, prudent, and cost efficient investment.*

*The ACCC also considers that an appropriate process for incorporating prudent and efficient capital expenditure into the RAB would:*

- involve a broad ex-ante check on the reasonableness of proposed ARTC funded capital expenditures in Schedule H and, if the expenditures are found to be reasonable, then they will be rolled into the RAB in the year the forecast expenditure is commissioned; and*
- establish a capital expenditure allowance based on the forecast capital expenditures that are found to be reasonable. At the end of 5 year capital expenditure term, the ACCC will check ex-post any capital expenditures incurred that are greater than the allowance. If the additional expenditure is found to be reasonable then that expenditure and any the return on the expenditure would be rolled into the RAB.'*

### **2.3.2 Prudent Capital Expenditure**

*'It is standard practice among some regulators to consider prudent capital expenditure in regard to the scope, standard and cost of that capital expenditure.'*

*'The scope of capital expenditure is the extent and number of capital projects. The reasonable and prudent scope of capital expenditure is that which:*

- is appropriate given the geographic definition of ARTC's network and the forecast size of the market for above-rail services;*
- does not include capital biases;*
- is commercially sound; and*



- *has been subject to effective consultation with relevant stakeholders*<sup>7</sup>. ‘

*‘The reasonable and prudent standard of capital expenditure is that which:*

- *is not over-designed or excessive for the proposed traffic level;*
- *meets a specified level of construction quality that is consistent with normal industry practice and is suitable for the network given the proposed traffic level; and*
- *does not allow for an unwarranted level of investment. ;*

*‘The cost of capital expenditure refers to the financial cost of the capital projects. Capital expenditure costs are reasonable and prudent if they reflect scope and standards that are appropriate for the proposed traffic level. The efficiency of cost estimates may also be independently assessed using industry costing benchmarks or global book values for equipment (such as signalling). Given the intent of the high-level review of ARTC’s processes for producing capital expenditure estimates, the ACCC has not conducted a detailed review of cost estimates in Schedule H using industry costing benchmarks or global book values. However, such an approach may be warranted as ARTC approaches the revenue ceiling. ‘*

### **2.3.3 Scope of the Capital Works**

*‘The ACCC considers that the processes and criteria adopted by ARTC are likely to promote capital expenditure that is appropriate given the geographic definition of ARTC’s network and the forecast size of the market for above-rail services.’*

*‘The ACCC considers that, to some extent, unintended capital biases will emerge as result of ARTC’s intention to accommodate standard train lengths that have increased from 1,500 metres to 1,800 metres. However, there is no evidence that ARTC has deliberately sought to engage in capital expenditure projects related to extended train lengths that will result in the exclusions of shorter trains from the network.’*

*‘Overall, the processes and criteria adopted by ARTC to evaluate and determine the scope of capital expenditure appears to be robust and in accordance with industry practice. The ACCC thereby considers that the processes and criteria are likely to promote a reasonable and prudent scope of capital expenditure.’*

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<sup>7</sup> As discussed in Section D.7.2.2 of the ACCC’s Draft Decision.

### **2.3.4 Standard of the Capital Works**

*'The ACCC also considers that the stated standard of the capital works, coupled with the fact that project standards are reviewed under the processes and criteria that determine the scope of capital works, appear to be consistent with both the forecast traffic level and standard industry practice.'*

*'In terms of whether the standard of capital works meets a specified industry level of construction quality, the ACCC makes two observations. First, while the ACCC has not conducted an audit of ARTC's specific design standards, it has no information before it to believe that ARTC's design standards do not comply with either the requirements of the Australasian Rail Association's National Codes of Practice or relevant Australian design standards. Furthermore, the ACCC has no reason to believe that ARTC's design standards raise concerns with the Rail Industry Safety and Standards Board.*

*Second, the construction standards, particularly the intended harmonisation of network standards, are intended to promote efficient use of the network. This is evident in that the standards relating to track behaviour will increase network capacity (for example, by increasingly the carry of heavier loadings and improving rail grind profiles). Furthermore, the construction standards are likely to reduce maintenance activity and costs in the longer term (for example, by improving ballast loadings and preventing rail bending), which in turn will enhance the capacity of the network.*

*Given ARTC's intention to increase traffic growth and utilisation of the network, the design standards adopted by ARTC do not appear to be unreasonably over-designed or excessive for the proposed level of traffic over the term of the Undertaking.'*

### **2.3.5 Cost of Capital Works**

*'ARTC has indicated that it assesses the cost efficiency of different project delivery mechanisms on a project-by-project basis. ARTC broadly favours an alliance model for major capital projects because it allows for a competitive selection process, provides a guarantee of available services and known rates and allows for flexibility in the execution of projects. ARTC has indicated that its guiding principles endorse an alliance approach when:*

- specialist or scarce resources are required;*
- projects have an uncertain scope and significant potential latent conditions; and*

- *projects need to be delivered in a relatively short timeframe.*

*ARTC favours a tender approach when project scope is well defined, site conditions well understood, and there is likely to be reasonable competitive tension in bidding.*

*Given these conditions, the ACCC considers that the guiding principles used by ARTC to decide appropriate project delivery mechanisms appear to reflect appropriate industry practice. In addition, as the processes and criteria used to determine the standard and scope of capital expenditure also reflect industry practice.'*

ARTC supports the overall approach adopted by the ACCC in the circumstances which:

- considered that a high-level review was appropriate as the network is not expected to approach the revenue ceiling during the term of the 2008 IAU;
- focused on ARTC's processes for generating the scope, standard and cost of ARTC's proposed Capital Expenditure for the interstate network;
- recognised that ARTC has commercial incentives to ensure that its Capital Expenditure is reasonable and Prudent because it is reliant on the realisation of increased market shares arising from increased capital investment to reduce its costs and improve its profitability;
- recognised that there was a need to balance the expectation that network revenue will not approach the ceiling and ARTC's commercial incentives to engage in efficient Capital Expenditure with the likely effects of any inefficient capital investment on current and future access seekers and the public interest;
- recognised that there was not necessarily a requirement to assess Schedule H on a project-by-project basis, which was unlikely to provide substantial benefits to the ACCC's assessment of the Undertaking;
- did not include a detailed review of cost estimates using industry costing benchmarks or global book values and that this may be warranted only where ARTC approaches the revenue ceiling; and

- recognised that the reasonable and Prudent scope of Capital Expenditure is that which is appropriate given the geographic definition of ARTC's network and the forecast size of the market for above-rail services, does not include capital biases, is commercially sound and has been subject to effective consultation with relevant stakeholders.

Apart from largely completing the substantial investment program in relation to ARTC's North-South corridor over the last several years, the circumstances in which ARTC prescribes Capital Expenditure estimates for the period 1 July 2012 – 30 June 2018 are largely identical to the circumstances prevailing in 2008.

In relation to the matter of effective consultation with stakeholders, ARTC contends that it has significant commercial imperatives to consult with stakeholders about new network investments, particularly as it does not recover its stand-alone costs and faces inter-modal competition, which constrains its access prices. For example, if ARTC were to invest in a project intended to bring about increased network capacity and the anticipated demand for such capacity did not materialise, then ARTC's return in relation to the interstate network would be adversely affected. In order to provide some comfort to the ARTC Board and investors, some certainty around the materialisation of market volume must be provided commensurate with the return being sought. ARTC can only obtain some certainty in this regard through improving its understanding of the needs and constraints of the markets it serves to ensure that its modelling is robust and that investments in other parts of the transport chain are complimentary. This can only be achieved through effective consultation.

Nevertheless, as a result of the ACCC's assessment of the 2008 IAU, and at the ACCC's request, ARTC included clause 6.5 into the 2008 IAU which requires ARTC, when planning for Additional Capacity on the Network sought by Applicants or itself, to:

- provide Operators with a reasonable opportunity to present their views regarding Additional Capacity;
- outline its views regarding Additional Capacity; and
- circulate a summary of the results of consultation regarding Additional Capacity to the Operators including, where applicable, reasons for disagreeing with Operators' views.

### **3. Development of 1 July 2012 – 30 June 2018 Capital Expenditure**

#### **3.1 Overview of Proposed Investment Scope**

ARTC's anticipated Capital Expenditure scope for the period 1 July 2012 to 30 June 2018 is a combination of:

- 1 Expenditure on both the SSFL and ATMS development, which was anticipated in the 2008 Capital Expenditure proposal but which for various reasons has not yet been completed.
- 2 Projects not envisaged at the time of the 2008 Capital Expenditure proposal but which have subsequently arisen, been funded and which remain to be completed.
- 3 New investments anticipated to be approved and funded during the period 1 July 2012 to 30 June 2018.

For the purposes of this application, approval is only being sought to vary the 2008 IAU to recognise the third category of this expenditure, i.e. new investments expected to be approved and funded up to 2018. The expenditure envisaged in 2008 but not yet completed, and projects not envisaged in 2008 but now underway, will both be dealt with separately in accordance with Clause 4.4(e) of the 2008 IAU when these projects have been finalised. Any other subsequent variances to Capital Expenditure incorporated in Schedule H of the 2008 IAU will also be dealt with in this manner.

The expenditure associated with the first two categories above is anticipated to be \$434m in 2012-13. A further \$18.5 m is anticipated to be spent over the subsequent three years.

Expenditure which is the subject of this application amounts to approximately \$626m over the six year period and represents an average spend of approximately \$104m per year. The majority of the expenditure is directed at the following three enhancements:

- Roll-out of the ATMS, which is a communications based signalling system that supports significant improvements in both productivity and safety.
- Capacity on the east-west network, principally to accommodate growing volumes of minerals and intermodal traffic while maintaining intermodal performance objectives.
- Strengthening of the track on the east-west network to allow continued increase in speed/axle load of trains, with subsequent productivity and capacity benefits.

The full anticipated expenditure also includes small amounts of miscellaneous corridor capital.

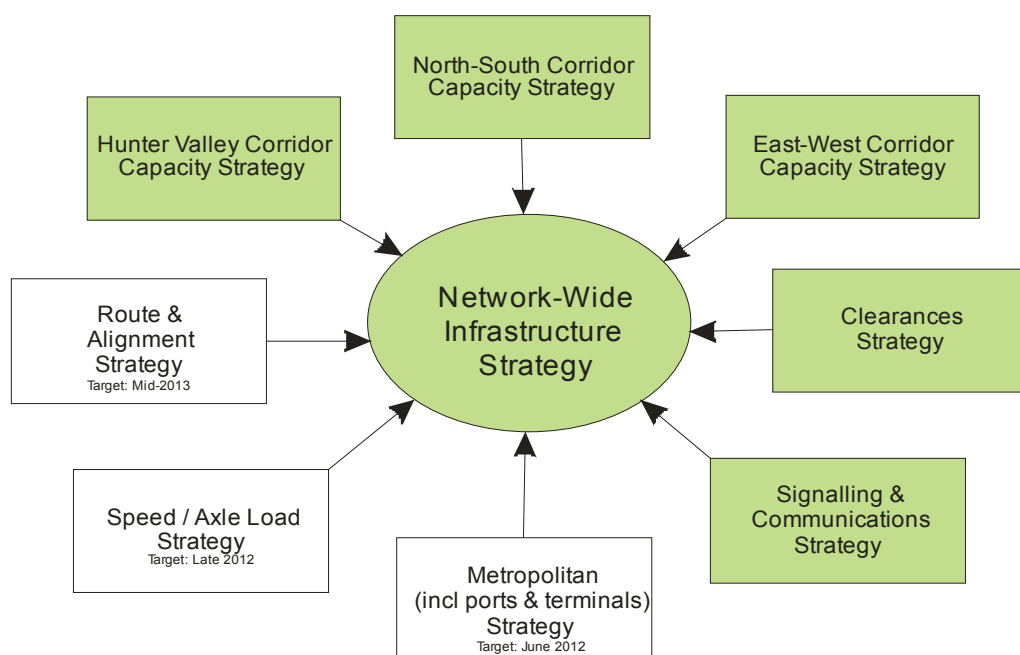
To be consistent with the approach taken by the ACCC to determine whether Capital Expenditure forecasts over the 2006-07 to 2011-12 were Prudent, this submission will primarily focus on ARTC's processes for the identification, approval and delivery of capital works projects. It will also provide a brief overview of the background to both the projects not envisaged in the 2008 submission and those projects expected to be delivered over the 2012/13 – 2017/18 period but which have not yet commenced.

In its 2008 determination, the ACCC highlighted the importance of assessing Prudent Capital Expenditure in regard to the scope, standard and cost of that Capital Expenditure. This submission also aims to provide a concise explanation of the mechanisms by which ARTC manages its investment process to ensure that outcomes against these criteria are Prudent.

### 3.2 ARTC Investment Strategy Development Process

ARTC aims to maintain a rolling strategy for infrastructure development to provide the framework for capital investment decisions. These infrastructure strategies aim to both address emerging capacity bottlenecks and to identify opportunities for productivity enhancements. The key objectives are to ensure that volume growth is not constrained by capacity, and to deliver productivity improvements as early as possible when they are economically justified.

The current scope and status of ARTC's infrastructure strategies are shown in the following diagram. The intention is that once all of the strategies have been developed they will be reviewed and updated on a regular basis.



Strategy released or in advanced draft

The approach to the development of each infrastructure strategy is tailored to the circumstances of that strategy. However, a number of themes are common to the strategies, including:

- *Forecast volume is based on detailed modelling of both existing and potential future traffics.* In general, strategies are developed in the context of two scenarios – a base case scenario adopting ‘most likely’ assumptions, and a ‘high’ volume growth scenario that considers the circumstances where existing traffics grow at relatively optimistic rates, and all known ‘prospective’ volumes eventuate. The ‘high’ growth scenario ensures that planning for enhancement projects proceeds in accordance with the timeframe necessary for capacity to remain ahead of demand, recognising that it is easier to slow down projects than it is to accelerate them. Economic and financial analysis of projects is, however, based on the base case, or ‘most likely’, scenario to ensure that investment decisions are made on a reasonable basis.
- *The strategies are based on achieving market-driven outcomes.* ARTC continues to use market research, feedback from its customers and an elasticity model to identify and quantify the factors that are likely to have a beneficial impact on rail efficiency and competitiveness with road. Investment strategies are developed in the context of achieving the maximum increase in competitiveness at the lowest overall cost. In recent years a material amount of minerals traffic, which does not compete with road, has begun to emerge on the interstate network. In this case, ARTC is primarily concerned with providing adequate capacity and meeting the operational cycle times required for efficient operations. Investment strategies also have regard to the specific characteristics of minerals traffics when considering potential improvements to the performance or capabilities of the infrastructure.
- *The strategies aim to facilitate integrated and long-term solutions.* Railways, being a network business, have a high number of interdependencies. At the same time, the very long-life and high-cost nature of the assets means that it is important that short-term investments are made with appropriate regard to achieving long-term outcomes. Accordingly, while each of the strategy areas focuses on the specifics of that geography or operational parameter, it takes into account the direction of all of the other strategy areas. For instance, capacity planning on the east-west network considers what capacity benefits would arise from ATMS or double-stacking capability, while the Signalling & Communications Strategy considers the extent to which investment in ATMS can be justified for its capacity benefits.
- *Solutions are designed to achieve market outcomes at the lowest cost.* Within the context of the long-term direction for the infrastructure, specific investments are identified and progressed on the basis of maximising net present value. In general, this

means that the solution that achieves the objectives at the lowest cost is preferred. However, this is tempered to the extent that projects delivered now have implications for future costs. For instance, recent loop projects on the Melbourne – Adelaide Segment have been built to 1800m length even though the corridor currently only allows for 1500m trains, since it has been assessed that the incremental cost of the extra 300m built in the short-term has a lower NPV than incurring the high fixed cost of a further lengthening of the loop when the corridor goes to 1800m permitted length, which is anticipated to be justified in the next five years.

- *Solutions are supported by appropriate modelling.* Theoretical spreadsheet models are used to determine the impact of volume changes on key performance parameters, generally capacity and transit time, and to then assess the relative performance of potential investments on mitigating deteriorations in performance. The theoretical models are then validated, if appropriate, using simulations.

ARTC maintains a continuous dialogue with rail operators to help guide the development of its overall strategy direction. Specific discussions on investment strategy are held as appropriate, while drafts of investment strategies are usually circulated to operators for comment. Investment strategies are generally released as consultation documents and feedback is welcomed, recognising that the strategies only provide the context for investment decision making and that individual projects will undergo further rounds of review and engagement with stakeholders before a final approval is granted.

ARTC's investment strategies are generally endorsed by the Board for public release following review by the ARTC Executive.

### **3.3 Project Governance and Delivery Process**

Projects identified through the strategy development process then follow a number of paths for further development depending on whether the project is to be internally funded, requires an equity injection from Government as ARTC's shareholder or would be most appropriately funded through a Government grant.

Importantly though, all projects are now managed in accordance with ARTC's project management procedure, PP157 (confidential Annexure 1). PP157 provides a structured and scalable control process for projects from inception to close-out. Projects are managed on the basis of a six phase process with approval gates at the commencement of each phase and a hierarchy of oversight. Controls ensure that for each level of the project team, the next level up has a means of:



- monitoring progress;
- reviewing plans and options;
- detecting problems;
- initiating corrective action; and
- authorising further work.

Significantly in this context, PP157 requires close attention to the proper definition of project objectives, assessment of options to achieve those objectives and financial analysis to support the recommended solution.

Financial analysis is undertaken in accordance with ARTC's Project Evaluation Procedure, FSFS067 (confidential Annexure 2), which gives primacy to the net present value calculation of the project from the company's perspective.

Phases under PP157 are as follows:

### **3.3.1 Phase 1 – Concept Assessment**

The Concept Assessment phase is intended to answer the question "Why?", in relation to proceeding with a particular project. It consists of a preliminary review of the need or benefits of the proposal, cost and technical feasibility, and a cost/benefit assessment to determine if the project should proceed. Assessment of demand factors may include consultation with the relevant manager, or with customers, which benefits analysis in terms of meeting key performance criteria and corporate goals and/or a preliminary economic analysis.

Supply factors may include assessment of technical feasibility, resource requirements, risk identification, preliminary financial analysis and estimate of cost.

This phase of the project management process is essentially directed at ensuring efficient scoping of the project. It is addressing the question of whether it is justified to undertake an investment to achieve defined outcomes such as meeting a market need or extending the life of the network.

### **3.3.2 Phase 2 – Project Feasibility**

Phase 2 is a baseline evaluation of project feasibility (including costs and benefits), from which the need for further project definition and scoping is identified, along with development and assessment of options. At this stage, the project manager will be attempting to answer the questions What? When? And by Whom?

In this phase there is usually further consultation with industry, both on the broad strategy and the detail of the projects and their implementation.

This phase is extending the process of determining efficient scope by assessing alternative options for achieving the defined objectives with the aim of optimising value for money and ensuring that the project represents an efficient means to achieve the defined outcomes.

### **3.3.3 Phase 3 – Project Assessment**

Phase 3 comprises a detailed review of the project to demonstrate that it will satisfy the Corporate Plan and value creation criteria.

The primary intent of this phase is to vigorously test the viability of the project via a thorough development of scope, approval of this scope by stakeholders, and assessment of costs and intended outcomes prior to the commitment of significant resources and expenditures. This phase includes detailed scope development, which may require a more detailed design than previously undertaken.

The outcome of this phase is the compilation of the Project Management Plan which addresses the following:

- project objectives;
- scope of works;
- project budget;
- financial evaluation;
- project risk assessment; and
- recommendation.

During this phase, the optimisation process is extended to determine what the appropriate standards are for the investment. While ARTC generally constructs its projects using its detailed engineering standards, which have been rigorously developed over a long period of time to meet safety and technical performance outcomes, the standards do allow considerable room for tailoring design to business objectives. For instance, while the standards prescribe minimum track centres, the design of individual projects may assess whether wider track centres are desirable to minimise life-cycle costs through easier maintenance access, or whether a waiver should be sought to reduce track centres where this will significantly reduce costs, for instance where there is an existing road overbridge. A detailed functional

specification is also typically prepared in this phase, allowing the design, of signalling in particular, to be optimised for the required functional outcomes.

This phase also puts in place the foundations for delivery of the project at an efficient cost. This phase requires the development of a detailed Project Management Plan, which must address, among other things:

- A project delivery strategy,
- A quality management plan,
- A detailed project schedule,
- A resource management plan, and
- A commercial management plan.

This phase also requires a detailed risk assessment to be completed.

#### **3.3.4 Phase 4 – Project Approval**

Phase 4 requires the formal approval from senior management or the ARTC Board for implementation of the project, consistent with approved delegations.

This phase is essentially a review stage. It provides for oversight of the process to this point to ensure it has been completed in accordance with the project management procedure and that the project as proposed achieves its objectives and remains commercially justifiable. In the context of this submission, it is a mechanism for validating that the scope and standards set for the project are Prudent and that an appropriate plan is in place to ensure efficient delivery of the project.

#### **3.3.5 Phase 5 – Project Implementation**

Project delivery splits broadly into the following:

- Phase 5A - Procurement
- Phase 5B - Project Initiation
- Phase 5C - Project Delivery (incorporating the commissioning of the works)

This phase shifts the focus to the efficient execution of the project, with the key element being Phase 5C - Project Delivery. Project delivery sees the project works underway and implementation of the components of the Project Management Plan. This aspect of the project is about controlling the production of the agreed products, to the stated quality standard, within

the cost, effort and time agreed, ultimately to achieve the defined benefits. The processes in controlling the works are likely to be event driven, as problems and circumstances arise, as well as being performed on a regular basis. This phase also includes auditing and regular monitoring and reporting of progress of the works.

### **3.3.6 Phase 6 - Project Close-Out**

In Phase 6, Project Close-Out, there is a formal requirement for a Project Evaluation to assess the performance of the project, in particular covering the performance of the project against the defined objectives, and the cost and quality outcomes.

## **3.4 Summary of Projects**

### **3.4.1 Projects Envisaged in 2008 and Not Yet Complete**

The SSFL and ATMS Concept Development were both anticipated in the 2008 forward works program.

The SSFL was subsequently delayed due to a combination of unforeseen factors in 2008 including issues with services relocations, necessary approvals from RailCorp and the ability of RailCorp to provide signalling resources for signalling interface works. It is anticipated that the SSFL will now be completed in the 2012/13 year.

The ATMS proof-of-concept phase [covered in 2008-09 to 2011-12 forecasts] is anticipated to be essentially complete at 30 June 2012, but a small amount of money has been carried into the 2012/13 year.

Variations to prior forecasts in Schedule H will be dealt with at a later time in accordance with Clause 4.4(e) of the 2008 IAU.

### **3.4.2 Projects not envisaged in 2008 and currently underway**

In the period since 2008, there have been three rounds of major investment initiatives on the interstate network as follows:

- In late 2008, ARTC received equity funding from the Australian Government to support a range of projects as an economic stimulus in response to the global financial crisis. These projects were ultimately progressed under the 'Nation Building' banner. The projects were a combination of projects that had been part of the North-South Strategy

(previously developed in consultation with stakeholders) but which had not been completed, projects identified in the strategy development process but not at that time funded, and projects that arose as a result of then recent additions to the ARTC network.

- In the 2010 Australian Government budget a further round of projects, funded through a further equity injection, were announced. These projects were to some extent a follow-on to the first round of economic stimulus expenditure. This round of investment had a particular focus on productivity benefits and is generally known as the 'Productivity Package'.
- In 2007, the Australian Government announced that it would make available \$840m for projects to facilitate freight movements between Sydney and Newcastle. This program is generally known as the Northern Sydney Freight Works (NSFW). The overwhelming majority of the works are on the RailCorp owned track between North Strathfield and Broadmeadow and the funding is being made available directly to NSW for these projects. However, one project has since been identified on the ARTC network (see below) and is being funded by a grant to ARTC.

From the Nation Building package there is one project, a new loop at Ambleside in South Australia, which is expected to involve \$1m in expenditure during the 2012/13 financial year. This project falls on the Adelaide (Dry Creek) – Melbourne (Spencer Street) Segment.

From the Productivity Package a number of projects will have some funding, in some cases quite substantial, in 2012/13. These are:

- **North Coast curve easing:** \$5m on the Newcastle (Islington Jct via Mains) – Queensland Border (Border Tunnel) segment.
- **Whyalla – Cootamundra re-railing:** \$101.4m spread across the Whyalla –Port Augusta, Adelaide (Dry Creek) – Parkeston, Crystal Brook – Parkes and Cootamundra – Parkes segments.
- **Parkes – Broken Hill resleepering:** \$29.2m on the Crystal Brook – Parkes segment.
- **Gheringhap – Maroona new loops:** \$16.7m on the Adelaide (Dry Creek) – Melbourne (Spencer Street) segment.

The Hexham loop project from the NSFW package will involve expenditure of \$0.8m in 2012/13 on the Newcastle (Islington Jct via Mains) – Queensland Border (Border Tunnel) Segment.

In addition, ARTC is in the process of implementing a major program of ballast rehabilitation on the Sydney – Melbourne corridor. This program is a response to a significant increase in

track drainage issues on this corridor, which is impacting on train performance. Capital expenditure of \$12.8m is expected in 2011/12 with \$12.7 m in 2012/13 and then \$5.1m, \$8.8m and \$4.6m in subsequent years. An estimated further \$90.1 m of expenditure on this program is expected to be expensed.

It is important to note that both the stimulus funding under the Nation Building package and the subsequent Productivity Package funding were provided to ARTC as equity by the Australian Government as ARTC's shareholder. As such, there was a clear understanding that the investments enabled by these equity injections were expected to earn a return on the equity invested.

It should also be noted that these two equity injections were made under unusual circumstances and there were both time and Government process constraints that limited ARTC's ability to formally consult with operators. As a result, ARTC relied on past consultation with operators on the general direction of future investment and informal discussions on potential operational benefits of investment options. In particular, ARTC consulted extensively with PN and QRN on both the North-South Strategy investment and in the context of a joint ARTC / PN / QRN submission to Infrastructure Australia, while ARTC also benefited from a broader input through the Freight Rail Operators Group on a preferred list of projects for potential 'Auslink 2' funding.

Variations to prior forecasts in Schedule H will be dealt with at a later time in accordance with Clause 4.4(e) of the 2008 IAU.

### **3.4.3 *Projects Anticipated to be Approved and Funded Between 2012/13 and 2017/18***

Major projects that are anticipated to arise over the six year forward forecast period are as follows:

- **ATMS.** ARTC is currently working on finalising its Signalling & Communications Strategy. This strategy suggests that there will be an economic case for the roll-out of the ATMS on the interstate network. Roll-out would desirably follow-on from implementation of the system in the Hunter Valley. At this stage it is unclear precisely how the roll-out would be funded. Rail operators have been heavily involved in the ATMS proof-of-concept process and it is anticipated that they will strongly endorse its roll-out. Expenditure over the six year period is forecast at approximately \$181.1m with the anticipated order of priority being roll-out on the Adelaide – Parkeston, Adelaide – Melbourne and Newcastle – Queensland Border Segments.

- **East-West Capacity.** Significant volumes of minerals traffic are emerging in the north-east and north-west areas of South Australia to be exported through ports on the Spencer Gulf / Gulf St Vincent, while continued growth in east-west intermodal traffic is expected to place further pressure on transit times. Capacity constraints are beginning to emerge and it is anticipated that a program of new loop construction will be required to accommodate the volume growth, particularly if intermodal freight is to continue to provide market competitive transit times. Operators are increasingly expressing concerns around ARTC's ability to accommodate growth with market competitive services. Later in the six year forward forecast period it may be desirable to move to longer trains on the Melbourne – Adelaide and / or double-stacking on the Sydney – Parkes and Melbourne – Adelaide sections. These issues are being dealt with in the East-West Corridor Capacity Strategy, while the issues around double-stacking have already been canvassed in the Clearances Strategy. Expenditure is estimated at \$377m across the Adelaide – Parkeston, Crystal Brook – Parkes, Adelaide – Melbourne and Melbourne – Macarthur Segments.
- **Port Augusta – Tarcoola Track Configuration.** Current track configuration between Port Augusta and Tarcoola limits the speed / axle load configurations that can be operated. This particularly impacts on minerals traffics and operators have flagged an interest in exploring options to go to higher axle loads. Options will be considered in the Speed/Axle Load Strategy. Expenditure is estimated at \$68m on the Adelaide – Parkeston Segment.

#### **3.4.4 Corridor Capital**

ARTC maintains a small program of corridor capital works. These projects generally relate to items that are life expired and require renewal but which in the process of renewal are upgraded to a modern equivalent standard, enhancing their capability in the process.

At this stage, these corridor capital projects are budgeted by ARTC at a higher level of aggregation than the Segments prescribed in the 2008 IAU. Anticipated Capital Expenditure associated with corridor capital projects has been incorporated in Schedule H to Segments on a track kilometre basis.

#### **4. Variation of the 2008 IAU - 1 July 2012 – 30 June 2018 Capital Expenditure in the form of an extended Schedule H**

ARTC seeks to vary the 2008 IAU in order to incorporate indicative forecasts of Capital Expenditure for the period 1 July 2012 to 30 June 2018 in Schedule H as shown in Table 3 below.

Consequential amendments are also sought which include the removal of clause 2.4(c) which is no longer necessary, and subsequent re-numbering of clause 2.4.

ARTC does not seek to vary Capital Expenditure in accordance with clause 4.4(e) of the 2008 IAU at this time. As discussed earlier, ARTC incorporated indicative forecasts of Capital Expenditure for the period 2006-07 to 2011-12 based on the best information available to ARTC at that time. Circumstances have changed such that the substantial investment program undertaken by ARTC since 2006-07 has changed and expanded significantly. New projects that were not anticipated in 2008 have since been funded and projects forecast in 2008 have changed and/or been expanded due to funding being made available. Some of these new, changed or expanded projects are still being completed.

It is ARTC's intention to seek to vary Capital Expenditure in accordance with Clause 4.4(e) of the 2008 IAU in due course, once the substantial investment program currently being completed has been completed. ARTC is doing this for the following reasons.

- To seek such variations to Capital Expenditure when all projects undertaken as part of ARTC's investment program are completed and have been finalised from a financial perspective results in a more certain and efficient process, avoiding the need for further variation where incomplete projects are the time are completed. As such, variations can be presented for ACCC approval under Clause 4.4(e) as a comprehensive package.
- There is no prescribed time period in which such variations to Capital Expenditure are required under Clause 4.4(e) of the 2008 IAU.



**Table 3 - Schedule H to the varied 2008 IAU**

(Capital Expenditure)

Segment/Activity	Estimated Expenditure*											
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
<b>1. Adelaide (Dry Creek) – Parkeston</b>												
Improvement Project Works	597	1,629	1,913	1,913	1,913	-	14,000	54,825	40,825	-	-	-
ATMS Roll-out	-	-	-	-	-	-	-	-	36,200	36,962	-	-
Corridor Infrastructure Investment	9,476	10,151	10,313	10,243	10,363	10,563	5,754	6,189	6,591	6,321	6,399	6,399
<b>Total Capital Expenditure</b>	<b>10,073</b>	<b>11,779</b>	<b>12,226</b>	<b>12,156</b>	<b>12,276</b>	<b>10,563</b>	<b>19,754</b>	<b>61,014</b>	<b>83,616</b>	<b>43,283</b>	<b>6,399</b>	<b>6,399</b>
<b>2. Adelaide (Dry Creek) – Melbourne (Spencer Street)</b>												
Improvement Project Works	7,756	42,966	7,049	1,913	1,913	-	-	-	-	-	-	50,000
ATMS Roll-out	-	-	-	-	-	-	-	-	-	17,338	45,300	38,225
Corridor Infrastructure Investment	7,270	7,222	4,205	4,205	3,364	4,310	2,443	2,628	2,799	2,684	2,717	2,717
<b>Total Capital Expenditure</b>	<b>15,026</b>	<b>50,189</b>	<b>11,254</b>	<b>6,118</b>	<b>5,277</b>	<b>4,310</b>	<b>2,443</b>	<b>2,628</b>	<b>2,799</b>	<b>20,022</b>	<b>48,017</b>	<b>90,942</b>
<b>3. Melbourne (Tottenham) – Macarthur</b>												
Main South Track Improvement Works	118,322	300,807	194,873	-	-	-	-	-	-	100,000	100,000	50,000
Train Control Consolidation - South	48,852	5,691	-	-	-	-	-	-	-	-	-	-
Corridor Infrastructure Investment	6,783	11,586	2,330	2,082	2,405	2,170	4,511	7,560	4,600	6,410	6,353	6,353
<b>Total Capital Expenditure</b>	<b>173,957</b>	<b>318,084</b>	<b>197,203</b>	<b>2,082</b>	<b>2,405</b>	<b>2,170</b>	<b>4,511</b>	<b>7,560</b>	<b>4,600</b>	<b>106,410</b>	<b>106,353</b>	<b>56,353</b>
<b>4. Newcastle (Islington Junction via mains) – Queensland Border (Border Tunnel)</b>												
North Coast Improvement Works	80,266	125,752	27,799	728	-	-	-	-	-	-	-	-
North Coast Signals/Train Control Improvement Works	2,447	-	-	-	-	-	-	-	-	-	-	-

Northern Train Control Consolidation (allocation)	8,754	2,834	4,279	-	-	-	-	-	-	-	-	-
ATMS Roll-out	-	-	-	-	-	-	-	-	-	-	-	7,075
Corridor Infrastructure Investment	12,914	13,271	5,796	7,880	6,461	5,987	1,949	3,267	1,988	2,770	2,746	2,746
<b>Total Capital Expenditure</b>	<b>104,381</b>	<b>141,857</b>	<b>37,874</b>	<b>8,608</b>	<b>6,461</b>	<b>5,987</b>	<b>1,949</b>	<b>3,267</b>	<b>1,988</b>	<b>2,770</b>	<b>2,746</b>	<b>9,821</b>
<b>5. Crystal Brook – Parkes</b>												
Western NSW Improvement Works	8,834	9,986	- 417	-	-	-	14,000	21,000	-	-	-	-
Corridor Infrastructure Investment	3,569	3,775	2,166	4,256	3,723	1,616	3,082	3,314	3,530	3,385	3,427	3,427
<b>Total Capital Expenditure</b>	<b>12,403</b>	<b>13,760</b>	<b>1,749</b>	<b>4,256</b>	<b>3,723</b>	<b>1,616</b>	<b>17,082</b>	<b>24,314</b>	<b>3,530</b>	<b>3,385</b>	<b>3,427</b>	<b>3,427</b>
<b>6. Cootamundra - Parkes</b>												
Corridor Infrastructure Investment	1,771	783	3,660	2,807	1,399	970	569	612	651	625	632	632
<b>Total Capital Expenditure</b>	<b>1,771</b>	<b>783</b>	<b>3,660</b>	<b>2,807</b>	<b>1,399</b>	<b>970</b>	<b>569</b>	<b>612</b>	<b>651</b>	<b>625</b>	<b>632</b>	<b>632</b>
<b>7. Adelaide (Dry Creek) – Pelican Point</b>												
Corridor Infrastructure Investment	23	-	-	-	-	-	57	61	65	62	63	63
<b>Total Capital Expenditure</b>	<b>23</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>57</b>	<b>61</b>	<b>65</b>	<b>62</b>	<b>63</b>	<b>63</b>
<b>8. Port Augusta – Whyalla</b>												
Corridor Infrastructure Investment	-	50	50	-	-	-	216	232	247	237	240	240
<b>Total Capital Expenditure</b>	<b>-</b>	<b>50</b>	<b>50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>216</b>	<b>232</b>	<b>247</b>	<b>237</b>	<b>240</b>	<b>240</b>
<b>9. Moss Vale - Unanderra</b>												
Corridor Infrastructure Investment	337	494	117	876	766	738	198	332	202	282	279	279
<b>Total Capital Expenditure</b>	<b>337</b>	<b>494</b>	<b>117</b>	<b>876</b>	<b>766</b>	<b>738</b>	<b>198</b>	<b>332</b>	<b>202</b>	<b>282</b>	<b>279</b>	<b>279</b>
<b>Network (allocation)</b>												
Track Investment (eg Wayside Detection, Wagons, Plant & Equipment)	2,520	2,558	-	5,677	5,722	-	-	-	-	-	-	-
Signals & Train Control Investment												

(ATMS Concept)	552	13,940	20,351	32,053	-	-	-	-	-	-	-	-
Communications Investment (eg 3G 850, NTCS, ICE)	3,670	28,330	17,920	-	-	-	-	-	-	-	-	-
<b>Total Capital Expenditure</b>	<b>6,742</b>	<b>44,828</b>	<b>38,271</b>	<b>37,730</b>	<b>5,722</b>	-	-	-	-	-	-	-
<b>Other</b>												
Southern Sydney Freight Line	3,464	94,518	143,651	-	-	-	-	-	-	-	-	-
<b>Total Capital Expenditure</b>	<b>3,464</b>	<b>94,518</b>	<b>143,651</b>	-	-	-	-	-	-	-	-	-

**PP157 – ARTC PROJECT MANAGEMENT PROCEDURE (CONFIDENTIAL)**

**FSFS067 - ARTC PROJECT EVALUATION PROCEDURE (CONFIDENTIAL)**