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**ACT LIGHT RAIL COST ESTIMATES (25 JUNE 2026)**

**STAGES 1, 2A & 2B**

**Purpose**

This document provides and discusses the latest independent cost estimates by Smart Canberra Transport and Australian Logistics Study Centre (ALSC) for ACT light rail Stages 1, 2A and 2B, based on information released by the ACT Government, reports in the media, the Web and ChatGPT, and on independent life-cycle cost analysis by the writer. However, it should be noted that the ACT Government is parsimonious at best in release of any credible cost information and contract details in respect of light rail, if not for other major capital projects as well.

This review was prompted and is appropriate, given the public announcement by Chief Minister Barr (7Mar26) that among other measures to rein-in capital expenditure on infrastructure, a decision on progress of Stage 2B would not be taken until after the 2028 ACT election. This decision followed the Eslake review of ACT finances, commissioned by the ACT Legislative Assembly, which, among other things, criticised the funds being spent on infrastructure<sup>1</sup> instead of on more important projects for the community.

**Stage 1**

**Scope**

Stage 1 of light rail (Gungahlin-Civic) followed the Parliamentary Agreement between the Greens and Labor after the 2012 election that construction of Stage 1 would start before the 2016 election, which it did. It has been operating since April 2019, quite successfully.

**Estimates**

See Table 1 for the summary of latest cost estimates for Stage 1. For detailed estimates, see Table A-1 at Annex A.

The overall cost of Stage 1 is now estimated at \$1.367B (2016 prices) and \$1.900B adjusted to 2026 prices. One may well ask why so high when the published cost in 2016 was \$0.670B. The answer is two-fold. First, the \$0.670B contract figure comprises only the capital (equity and debt) of \$0.300B input by the contractor plus incurred \$Interest on that, plus the O&M cost. Second, the Off-Contract costs of \$0.697B comprise mainly the \$0.375B, capital contribution, financed by the government by debt, so incurring the cost of interest throughout the 20-year Operations & Maintenance (O&M) phase. The \$Interest for this debt is substantial at \$0.247B;<sup>2</sup> a figure which has never been disclosed and is buried somewhere in records of the ACT debt.

In addition, there are the project office costs incurred before and during both the construction and 20-year O&M phases of the contract.

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<sup>1</sup> The ACT's overall public sector finances were the third or fourth-worst of all states and territories, his report stated, and a large number of capital initiatives to build or upgrade infrastructure were entirely funded by debt. Expense policy decisions, where spending was increased without a comparable increase in revenue, worsened the government's net operating balance by at least \$7.2 billion over the past decade, of which \$3.6 billion occurred since 2022-23.

<sup>2</sup> An Interest cost never disclosed, except in budget papers somewhere; ACT's Capital Contribution was not amortised over the 20 years of O&M phase, and continues to add to ACT debt as conclude in the Eslake report (see Note 1).



# SMART CANBERRA TRANSPORT (SCT)

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<b>Table 1</b>				
<b>Light Rail Estimates</b>				
<b>Summary - Stage 1 - Gungahlin-Civic</b>				
<b>Stages 1 Phases</b>	<b>2016 \$B</b>	<b>2023 \$B</b>	<b>2026 \$B</b>	<b>Notes</b>
<b>Stage 1</b>				
\$Cost-Nominal	1.780	-	2.474	[1] [2]
<b>Total Real Cost incl 20Y O&amp;M (to ACT Government)</b>	<b>1.367</b>	<b>-</b>	<b>1.900</b>	[3]
Off-Contract Costs	0.697	-	0.969	[4]
\$Cost-Contract (Build & O&M)	0.670	-	0.931	[5] [6]
<b>Notes:</b>				
1. Nominal cost of contract (2016) known from A-G Report on Stage 1, June 2016				
2. Nominal cost is sum of annual costs for each year over the life of the project				
3. Real costs are periodic costs discounted to a base date/year				
4. Includes \$375 cap contribution and 20 y of \$Interest on that sum				
5. \$1.045B is the nominal cost of \$1.405B, to PV(2016), discounted at 3% pa over 20 years				
6. The nominal cost \$1.405B is total nominal cost \$1.78 less capital contribution of \$375M				

## Cost-Benefit

While Stage 1 has been an operational success, it cannot be said to be an economic success, in respect of value for money of the taxpayer dollar. The Auditor-General's report of 2016 concluded a Cost Benefit Ratio of only 0.49, in real terms, ie not including the ephemeral wider benefits claimed without supporting evidence by the Business Case. However, readers could see the ACT Government's *Light Rail Five Years on: Benefits Realisation Report 2024*, which claims various development benefits along the corridor, but not the actual dollar benefit to the taxpayer in terms of property taxes, lease and other charges, to the knowledge of the writer.

That said, the same claimed benefits could have resulted from a Bus Rapid Transit (BRT) system, which in a government report of 2012, was costed at half that of light rail and with twice the effectiveness, but simply ignored by the new Greens/Labor government, in favour of the ideological tram.

## Patronage

The Stage 1 Business Case (2016) cites annual patronage at 6,365,205 by 2031, up from 4,762,800 in 2021. Latest data on actual boardings is a weekly average of 90,000,<sup>3</sup> being some 4,680,000 each year, thus, at the projected 2021 level forecast in the Business Case. It should be noted that the current system, with its fleet of 14 trams, is at capacity during the morning and evening weekday peaks, therefore not able to increase patronage. Note also that, The Canberra Times reported (15Jun26) a large decrease in public transport patronage over the past 12 months (2025-26), the government blaming its faulty fare system but not mentioning the large number of erstwhile users now working from home. In 2025-26, annual patronage of all forms of public transport was only 12.7 million, against a target of 20.3 million.

From Table 1, the project cost for construction and 20 years of O&M will \$1.900B (2026 prices), for an annual cost of \$95M (2026), giving a cost per boarding of \$20 (2026). Assuming \$4 a ticket, the net subsidy is \$16 per boarding.

## Summary

Stage 1 of light rail can claim to have been an operational success, but an economic success is yet to be proved, especially in relation to the far-cheaper BRT option, rejected by the government in favour of light rail, as a Greens ideological project<sup>4</sup>, agreed to for Labor to remain in power from 2012. It should be noted that the Chief Minister of the time did not have to make that concession because the one (out of four) remaining Greens member would never have formed a minor government with the Liberals. Consequently, one can conclude that Labor's decision to go formally into coalition with the Greens, promising the light rail, was simply a political decision condemning the ACT to 25 years of Labor government so far.

<sup>3</sup> Web reference, 9Jun26, referring to ACT Government Open Data Portal and CMET Canberra Metro Operations

<sup>4</sup> Some critics claim that the greenhouse gas emissions created by construction and operation of Stage 1 have not and will never be offset by claimed savings in emissions. Real evidence, one way or the other, still remains to be seen.,



## Stage 2A

### Scope

Stage 2 - Civic to Woden - was announced in a brain snap by Chief Minister Barr, during his 11<sup>th</sup> hour, 2016 election speech. This election promise was made for purely political reasons, with zero knowledge of what would be involved as to cost or effectiveness, both of which have been the subject of severe criticism ever since.

Once the sheer difficulty and probable cost of Stage 2 dawned on the Government after the 2016 election, the Government split Stage 2 into two sub-stages, with Stage 2A limited to a technically feasible but very expensive leg from Civic to Regatta Point. Critics have speculated that splitting the stage into 2A and 2B was a government ruse so that a future government would be forced to follow with Stage 2B at some point. We will see!

Stage 2A is a 1.7Km<sup>5</sup> line from Civic, around the western side of London Circuit onto Commonwealth Avenue, down to Regatta Point, providing for three stations.

Although only 1.7Km, it has been turned out to be very, very expensive, mainly because of the decision to raise London Circuit, with new intersections, a bridge over Parkes Way and possible development of the Acton waterfront. There would also be the purchase of five additional trams, the modification of the existing 14 trams to operate on batteries in the Parliamentary Triangle, and additional maintenance facilities. In addition, there would be serious financing costs.

In respect of raising London Circuit, one could argue that it was not really needed for light rail and may be seen as a political decision to capture the land, for later sale, now taken up by the clover-leaf access to Commonwealth Avenue.

The Canberra Times (8Dec23) reported a contract price for Light Rail Stage 2A of \$577M, taken here to be for construction only of the 1.7Km of rail-line.<sup>6</sup>

To put this enormous sum into perspective, the equivalent build cost for Stage 1 from Gungahlin to Civic was \$90 per km (\$1,068M/12Km).<sup>7</sup> However, for Stage2A, the actual cost of construction cost is \$884M (See Table 2-A), giving a figure of \$520M per Km. As a comparison, Parramatta L1 and L2, of similar but more complexity was \$390M and \$287M per Km respectively.

So why the huge increase for Stage 2A over that for Stage 1 (some several times as expensive)? One may consider three basic reasons. First, the complexity of the Civic site is greater than the relatively simple engineering problem of Stage 1. Second, there is national inflation (up 24% from 2016 to 2023-see Table A-6- Applicable Inflation Rates). Third, and most important, is that the contract was let sole-source to the Stage 1 consortium, ie not put to competitive tender, giving the construction unions and the official contractor virtually carte blanche to charge a willing Labor government. Note that the cost componentry of the total cost has not been made public and never will be under a Labor government, due to a habit of hiding behind contract confidentiality and that the bid was never scrutinised by independent peer review to comment on its validity. A telling point, would be to know what salaries the managers and workers receive and what the unions involved are able to extract under terms of the contract.

### Estimates

Table 2 gives the latest independent estimates for Stage 2A, in 2023 prices and inflated to 2026 prices.

Detailed estimates are at Table A-2, Annex A.

The total real cost of construction and 20 years of O&M is \$1.817B (2023) adjusted to \$2.285B (2026).

These figure show, among other things, how misleading the published construction cost of \$577M really is, because of public ignorance of significant associated costs not declared, such as those for raising London Circuit, the Parkes Way bridge, as well as for contract financing and government project management.

<sup>5</sup> Km = kilometre

<sup>6</sup> It has been assumed here that the published build contract price of \$577M does not include the \$Interest incurred by the Contractor, as a detailed cost breakdown of the contract has not been made public.

<sup>7</sup> St1 build \$M/Km = (\$1,068M/12 = \$300M Contractor input + \$146M interest + \$373M Cap Contribution + \$247M interest (20Y))/12km



<b>Table 2</b>				
<b>Light Rail Estimates</b>				
<b>Summary - Stage 2A - Civic-Regatta Point</b>				
<b>Stages 1 Phases</b>	<b>2016 \$B</b>	<b>2023 \$B</b>	<b>2026 \$B</b>	<b>Notes</b>
<b>Stage 2A</b>				[1]
<b>Total Real Cost Actual including 20Y O&amp;M</b>		<b>1.817</b>	<b>2.285</b>	
Construction-Total		1.599	2.028	
O&M (20Y)[2030-2050]		0.218	0.257	
<b>Notes:</b>				
1. After policy split of Stage into 2A and 2B				

**Cost-Benefit**

The cost-Benefit of Stage 2A, given the Auditor-General’s report of 2019<sup>8</sup>, is very low for the project to be of any sense. The following conclusion is from para 3.59 of the A-G’s report.

*3.59 The Benefit Cost Ratio for Light Rail Stage 2a, calculated to two decimal places, was 0.38 excluding Wider Economic Benefits and 0.56 including Wider Economic Benefits. These were rounded up to 0.4 and 0.6 respectively for the Stage 2a Business Case.*

However, no costing expert would consider the figures given in the report to have any credibility. A more likely ratio would most probably be less than 0.1.

**Patronage**

Patronage has not been estimated here, but can be expected to be very low, even given service of the future business and residential population around London Circuit, plus some tourist traffic to the Acton waterfront, Regatta Point and Commonwealth Park.

**Summary**

In summary. Stage 2A constitutes a gross dereliction of duty by the ACT Government in the use of taxpayer funds, primarily because of ideology, non-existent, independent scrutiny by peer review, non-competitive tendering, possible overcharging by project providers and a level of acceptance by government.

**Stage 2B**

**Scope**

In May 2026, the ACT government announced the final route for the line to Woden: via Commonwealth Avenue; over the lake; around State Circle (eastern side); along Adelaide Avenue and Yamba Drive to Woden. This route depends on approvals from the National Capital Authority (NCA), concerning primarily crossing of the lake and transit through the Federal Triangle.

Before the Federal election of 2022, the Federal (Coalition) Government in power had promised \$135 million towards Stage 2A and 2B, which could be considered as a political bribe, given that the project made no economic or even practical sense. For example, there would then be a travel time of 30 minutes Woden-Civic, in lieu of the current 15 minutes by rapid bus, let alone what could be achieved on a dedicated rapid bus route with modern electric buses.

After the 2022 federal election, just as senselessly, the new Labor Government had offered a further \$87 million for Stage 2A, albeit at the expense of other infrastructure projects cancelled.

In 2021 the NCA announced that Commonwealth Avenue bridge would not be modified to carry light rail across the lake and published a project of its own for \$150M to upgrade the bridge, due essentially to its age. Work is proceeding from 2026 through 2028. The ACT government now plans to build for light rail a dedicated steel bridge across the lake, between the existing spans, given NCA approval.

<sup>8</sup> Redacted version of the *City to Woden Light Rail: Stage 2a City to Commonwealth Park Business Case* (Stage 2a Business Case), 10 September 2019



At the Parliamentary Triangle end, the route will now involve a cut and cover tunnel of some 300 metres, from a point after Coronation Drive, eastwards around and up onto State Circle, before Kings Avenue intersection.

One may see from Table A-3 (Annex A) that the construction work to get to Woden would be no mean feat, given the need for the main bridge (over the Lake), the tunnel, at least one more bridge (a centre span at Hopetoun Circuit), modification of centre pillars on two other bridges (Novar St/Kent St and Carruthers St bridges), construction of elevated stations and lift access, and the need for a 300 metre bridge across the Yamba Drive roundabout.

On 7 June 2026, it was reported that Chief Minister "Barr hits the brakes on ACT infrastructure pipeline to save \$700m" and confirmed no final decision will be made on light rail stage 2B to Woden until after the ACT election in 2028. With a bit of luck, common sense would prevail for Stage 2B to ever happen.

See **Box 1** for a few relevant letters to the editor of the Canberra Times, at that time.

### Box 1

Canberra Times [Published 11Jun26]

#### ***Barr's belated brake on capital spending***

*So, First Minister Barr finally (kicking and screaming no doubt) "hits brakes on projects" (Canberra Times, 8Jun26). He must have finally run out of other people's money or been read the riot act by rating agencies. At least there is now a chance that his light rail stupidity will never proceed past the scandalous waste of taxpayer money for the 1.7Km from Civic to Regatta Point at \$1.1B (contracted 2023 and \$1.4B estimated in 2026 prices), for construction only. My latest estimates for construction only of Stage 2B from the Regatta Point to Woden is \$ 3.3B (2026 prices). So good to see the intention to build needed infrastructure instead, like hospitals that critics like me have been advocating for over 10 years.*

*M. Flint*

*Coordinator, Smart Canberra Transport*

*8Jun26*

Canberra Times [Published 9Jun26]

#### ***Infrastructure pause wise***

*The government's announcement ("Barr hits the brakes on ACT infrastructure pipeline to save \$700m", June 7) is welcome and demonstrates it is finally showing some financial competence and focusing on addressing real community needs.*

*It confirmed no decision will be made on light rail stage 2B to Woden until 2028. Regrettably, the financial discipline came too late to stop the reckless, disruptive and cynical development of stage 2A, the main objective of which appears to have been to make it difficult to prevent the development of stage 2B.*

*The main beneficiaries of stage 2A, as Leon Arundell (Letters, June 8) has observed, were the six companies that own Canberra Metro who received \$577 million. The community suffered from the billion dollars added to the territory's debt and the disruption caused by its development.*

*The timeline for the approval of 2B is sufficient for a review of its efficacy to be undertaken and be informed by data in the 2026 census on work patterns, housing and transport choices.*

*The review would evaluate its cost; if it should be developed as a busway and stage 2A repurposed as a busway; the implications of its high travel time to Woden when compared to existing rapid bus services; establish if it is really sustainable given the greenhouse emissions produced in its construction and the extent of any city-shaping benefits. Savings identified could be used to fund the increased provision of much-needed health and housing infrastructure.*

*Mike Quirk, Garran*



**Estimates**

See Table 3 for the summary of latest cost estimates for Stage 2B. See Table A-3 at Annex A for detailed estimates.

From Table 3, estimated costs (2026 prices) are expected to be \$4.529B for construction and project management, and \$2.364B over 20 years for O&M; for a 20-year life cost of \$6.893B. These figures are a long way from any offered to date by the government.

Given that the project would not be even approved until after the 2028 election and construction through 2030-2040 and O&M from 2040 through 2060, one can only guess at the final cost. However, at \$6.893B now, one may conclude as others have that the project is a gross waste of public funds at huge opportunity cost to a jurisdiction like the ACT.<sup>9</sup>

To get a real appreciation of the extent of Stage 2B, one needs to have a close look at the extent of work that would comprise Stage 2B, if it ever proceeds.

Table A-3 (Annex A), also itemises possible work for a Cotter Road-Yarra Glen Interchange and a possible, future station along Yamba Drive, north of Curruthers Street. Approval for these possible works is yet to be decided. In any event, the cost of the interchange could not be attributed to light rail whereas that for the additional station would be part of Stage 2B.

<b>Table 3</b>				
<b>Light Rail Estimates</b>				
<b>Summary - Stage 2B - Regatta Point-Woden</b>				
<b>Stages 1 Phases</b>	<b>2016 \$B</b>	<b>2023 \$B</b>	<b>2026 \$B</b>	<b>Notes</b>
<b>Stage 2B</b>				[1]
<b>Total Real Cost Actual inc 20Y O&amp;M</b>			<b>6.893</b>	
Stage 2B Construction - Total			4.529	[2]
O&M (2040 - 2070)			2.264	
Project Office costs (2040-2070)			0.100	
<b>Notes:</b>				
1. After policy split of Stage into 2A and 2B				
2. Decision to proceed deferred until after 2028 election [Budget 2026 announcement]				

**Cost-Benefit**

Cost-Benefit analysis of Stage 2B has been minimal. The government would claim all sorts of benefits, as it has for other stages, but the ratio would be low. Even given the planned population of the route down Yamba Drive, patronage would be limited due to the fact that the Woden-Civic trip would take twice as long as on the current rapid bus service it replaces.

In the meantime, the government could be investigating alternative transport technology using rapid electric buses or and trackless trams, like that opted for over light rail by the Brisbane City Council.

**Patronage**

No expected patronage figures have yet been published by the government, to the writer's knowledge.

**Summary**

At a 2026 cost of \$6.893B, one may conclude, as others have, that the proposed Stage 2B would be a gross waste of public funds at huge opportunity cost to a jurisdiction like the ACT.

Given the June 2026 budget advice that there would not be a final decision on Stage 2B to Woden until after the ACT election in 2028, and with a bit of luck and rational thought for a change, Stage 2B will never happen.

<sup>9</sup> One may note that some cities in France, like Montpellier, of population about 500,000, have excellent light rail systems, but these are funded by the local councils (ACT equivalent), regional administrations and by the national government. Also, construction costs are very much lower. ChatGPT gives a 2026 figure of 20M-30M Euro per Km (\$33M-\$50M per Km).



**Estimates – Stages 2A & 2B**

A specific request to the writer was to know the estimates for Stage 2A and Stage 2B combined. These are at Table 4 of which the 2026 figures are the most relevant. The 2023 column gives only the Stage 2A estimates. So, Stage 2 all-up at \$9.178B for construction, O&M (20Y) and associated off-contract costs, should be considered a sum too great for the ACT jurisdiction to finance, given its already poor financial situation, including a large state debt, as described in the Eslake Report of 2026.

<b>Table 4</b>				
<b>Light Rail Estimates</b>				
<b>Summary - Stage 2A and 2B Combined</b>				
<b>Stages 1 Phases</b>	<b>2016 \$B</b>	<b>2023 \$B</b>	<b>2026 \$B</b>	<b>Notes</b>
<b>Stages 2A and 2B</b>				[1]
<b>Total Real Cost including 20Y O&amp;M</b>		<b>1.817</b>	<b>9.178</b>	[2] [3]
Construction Total		1.599	6.557	
O&M (2030-2070)		0.218	2.622	
<b>Notes:</b>				
1. Policy after 2018 election to split to Stage into 2A and 2B				
2. 2023 column shows Stage 2A only, at contract date (2023)				
3. 2026 column shows Stage 2A (adjusted to 2016) plus Stage2B (2026) combined				

**Estimates - All Stages**

Table 5 summarises the estimates for all three stages in use, in work or planned to date.

All up, ACT taxpayers could potentially be burdened with \$11.078B for light rail, should Stage 2B be approved. Of course, by then (2030 at earliest), there would be an extra four years of escalation of industry costs of some 20 per cent to take the total estimate to about \$13.300B.

Naturally one could expect the government to deny these figures, but without revealing its own estimates and existing contract costs, and exposing them to independent costing firms for validity, who in their right mind (other than rusted on government supporters) would give them any credence.

<b>Table 5</b>				
<b>Light Rail Estimates</b>				
<b>Summary 1 - Cumulative all stages</b>				
<b>Stages 1, 2A, 2B</b>	<b>2016 \$B</b>	<b>2023 \$B</b>	<b>2026 \$B</b>	<b>Notes</b>
<b>Gungahlin-Woden</b>				
<b>Stages 1,2A,2B</b>			<b>11.078</b>	[2]
Construction			7.488	
O&M (20Y)			3.553	
<b>Stages 1 &amp; 2A</b>			<b>4.185</b>	
Construction			2.959	
O&M (20Y)			1.189	
<b>Stage 1</b>	<b>1.367</b>		<b>1.900</b>	
Off-contract costs	0.697		0.931	
Construction and O&M (20Y)	0.670		0.931	
<b>Stages 2A &amp; 2B</b>			<b>9.178</b>	
Construction			6.557	
O&M (20Y)			2.622	
<b>Stage 2A</b>		<b>1.817</b>	<b>2.285</b>	
Construction-Total		1.599	2.028	
O&M (20Y)		0.218	0.257	
<b>Stage 2B</b>			<b>6.893</b>	
Construction			4.529	
O&M (20Y)			2.364	
<b>Notes:</b>				
1. All estimates in relevant year prices and adjusted to 2026 prices				



**\$Interest Burden – all Stages**

Another specific request to the writer was to estimate what the total \$Interest burden would be on ACT taxpayers. This turned out to be a very revealing exercise. The various interest components described below do not appear in any published documents and would not be verifiable without detailed access to contracts and government, budgeting records. These are shown at Table 6.

<b>Table 6</b>				
<b>Light Rail - stages 1 &amp; 2A</b>				
<b>\$Interest paid by Contractors and the ACT Government</b>				
<b>Stages 1, 2A, 2B</b>	<b>2016</b>	<b>2023</b>	<b>2026</b>	<b>Notes</b>
<b>[0]</b>	<b>\$B</b>	<b>\$B</b>	<b>\$B</b>	
<b>Stage 1 &amp; 2A \$Interest</b>	<b>0.393</b>		<b>0.835</b>	[1]
Stage 1	0.393		0.546	
Stage 2A		0.245	0.289	
<b>Stage 1 \$Interest</b>	<b>0.393</b>		<b>0.546</b>	
\$Interest (Cap Contribution) PV(2016)	0.247		0.343	[2][2a] [3]
PV (2016) of \$Interest Contractor part \$300M PV(2016)	0.146		0.203	[4] (7)
<b>Stage 2A \$Interest &amp; Finance</b>		<b>0.245</b>	<b>0.289</b>	
Real (PV 2016) Contractor Financing &Int on construction		0.245	0.289	[5] [7]
<b>Stage 2B \$Interest</b>			<b>1,120</b>	
Real Contractor \$Interest on Construction Cost			1,120	[6] [7]
<b>Notes:</b>				
0. For Stages 2A & 2B, the construction costs are borrowed @ 5%pa (assumed)				
\$Int paid is annual \$Repayment x 20Y, less construction cost				
%Int rate of 5% is assumed to apply to both return of equity and sum borrowed, of \$construction				
%Int of 5% is most likely too low, especially for return on equity				
1. Most probable \$Interest burden; Stage1 & Stage2A only				
2. ACT pays \$15M pa \$Int on \$375M @ 4% (assumed) for each of 20-year of 20Y O&M phase - Stage 1				
2a. PV(20Y at 3% pa discount) on \$Int of 4% pa on \$375M over 20 years of O&M phase; <b>not amortised</b>				
3. \$15M (375* 4%pa) paid every year after contract, added to ACT debt				
4. PV @ 3% pa discount of \$Int on \$300M contractor loan @ 5% pa; amortised over 20Y of O&M phase; Stage 1				
5. PV @ 3% pa discount Total \$Int paid on \$577M construction cost borrowed @ 5%pa over 20Y; Stage 2A				
6. PV @ 3% pa discount Total \$Int paid on \$2,618M construction cost borrowed @ 5%pa over 20Y; Stage 2B				
7. PV discount rate of 3% pa, being the average %Inflation rate over the construction periods				

Only the 2026 figures for Stages 1 and Stage 2A should be considered by readers, this figure being \$0.546B for Stage 1 and \$0.289B for Stage 2A, for a committed total in 2026 of \$0.835B (over 2019 to 2050 for contract periods of both stages). That is a hefty burden that is known (maybe?) to very few members of the government, and not at all to the public.

Note that to achieve standard values for every cost component, periodic costs (nominals for each year of contract) have been discounted at a rate of three per cent (3%) per annum back to base dates of 2016 for Stage 1 and 2023 for Stage 2A. Estimates for Stage 2B are already in 2026 prices. The 3% per annum discount used is the average percentage inflation rate used for the estimates in the report, based on the Australian Bureau of Statistics (ABS) recorded rates. See Table A-4. Note also, the comments later under ‘A note on government costing of projects’ on how the government incorrectly (dishonestly?) uses a discount rate of at least 7% per annum, to obtain a much lower apparent cost for release to the public.

\$Interest figures in this report have been logically determined using commonly used loan amortisation and Present Value (PV) discounting formulae.

That said, the public will probably never know the actual figures buried in contracts and ACT budgets.



**Government capital inputs**

The current Interest rate (2026) charged to the ACT government is 3.5%-4.5%.<sup>10</sup> The estimates in this report assumes a rate of 4% per annum.

Thus, for the Stage 1 capital contribution of \$375M by the government, there will be an ongoing annual interest burden of some \$15M a year, because the government capital input at the Stage 1 commissioning date (2019) was not amortised over the 20-year O&M phase, so adding \$15M per annum, forever, to the ACT government’s current debt of \$12.5.<sup>11</sup>

**Contractor capital inputs**

Capital input by the contractor for Stages 1 and 2A, is a combination of equity and debt (ratios not known). The minimum return on equity required and the interest rate on debt were both assumed to be five (5) per cent per annum.<sup>12</sup> Contractor inputs and interest will be amortised over the 20-year O&M phases, with the interest component of annual<sup>13</sup> repayments reduced to a total PV cost at base dates of 2016 and 2023 for each stage respectively, at a 3% per annum discount rate.

**Cost Inflation**

Table 7 gives the Consumer Price Index (CPI) figures for the period 2016 to 2026, recorded by the ABS. However, while estimates have been inflated to 2026 prices from 2016 for Stage 1 and from 2023 for Sage2A, it should be noted that such construction contracts normally provide for cost escalation rates on material and labour at one or two percentage points above the prevailing CPIs. Consequently, eventual light rail costs could be even higher than those shown here. CPI rates have been used here because actual contract escalation rates are not known due to confidentiality of contracts.

<b>Table 7</b>				
<b>Light Rail - All stages</b>				
<b>Applicable Inflation rates</b>				
<b>Stages 1, 2A, 2B</b>	<b>2016</b>	<b>2023</b>	<b>2026</b>	<b>Notes</b>
%Inflation 2016-2026			1.39	[1]
%Inflation 2023-2026			1.18	[1]
<b>Notes:</b>				
1. Inflation 2016-2026, from annual, ABS CPI figures.				

**A note on costing of major capital projects**

As one may imagine, cost estimating of major capital projects, often original in purpose, of latest technologies and fraught with risk uncertainties, can be a difficult task. Very few such projects approved ever come in under budget, as can be shown by any number of projects, for both military hardware and civil infrastructure. Classical examples at present are Snowy 2.0, in-land rail and, the daddy of them all, the Melbourne rail loop, the train to nowhere as often described, currently at about \$200B.

Generally speaking, such estimates are based on several sources, depending on the type of engineering involved, novelty and timeframe, eg for military hardware and civil projects. In the case of this revision for light rail, being a civil engineering project, estimates have been made using several bases, namely: known contract prices; government published information like Business Plans and related reports; known costs for similar recent projects; government and industry standards and guidelines, published professional papers; information from the Web and Artificial Intelligence (.AI) packages like ChatGPT; cost estimating databases; standard financial formulas; and the professional knowledge and experience of the estimator.

<sup>10</sup> ChatGPT figures

<sup>11</sup> ChatGPT figures

<sup>12</sup> 5% is thought consistent with net industry returns on equity, but, being unknown, could be significantly higher.

<sup>13</sup> Repayments may be monthly, so reducing total interest costs marginally, but are calculated here annually for simplicity.



For example, in this case, examples of similar recent projects are the Molonglo Bridge, upon which the estimate for the possible bridge across the lake is partly based, and the Monaro Highway/Lanyon Drive flyover upon which the estimate for the possible bridge over the Yamba Drive roundabout is partly based.

Information gleaned from the Web and .AI packages can be quite useful to help with identifying cost components of a project but in respect of costs cited therein, these have to be treated with caution and need the interpretation of sound estimating knowledge.

An aspect often unappreciated is the effect of the different size of projects, generally by projected cost brackets. Lesser projects and repeat acquisition can (or should) be executed according to formal approved procurement policy and procedures, including competitive tendering. However, in the case of very large projects (sometimes referred to as mega-projects), of important impact on a state's financial capabilities and/or national security, these will become politically driven in lieu of following standard procedures. Canberra's light rail is such a case, having been initiated for ideological reasons and subsequently manipulated over the years, even to the extent of enacting legislation to widen the proposed light rail corridors and preventing legal challenge to light rail.

Another major and obvious aspect important to estimating is the level of risk uncertainty engendered by the escalation of costs of materials and labour, technological uncertainties, finance availability and often interference by vested interests, be they government or private, often leading to loss of financial control. Cost blowouts will almost always occur, sometimes spectacularly like that for Snowy 2.0. Consequently, estimates cannot be stated blithely as an exact figure but accompanied by probable margins expressed as confidence levels, plus/minus percentages, by incorporating contingency values within the estimate, or by use of an expected escalation factor, according to the level of perceived technological risk and other unknowns.

Although not applied in this report, the detailed cost analysis of a capital project should be subject to formal cost risk analysis, using specially designed computer models such as @Risk® by Palisade/Luminvero or equivalents.<sup>14 15</sup> Consequently, given probable risk uncertainty, estimates in this report should be expected to be even significantly larger.

### **A note on government costing of projects**

Readers should note, if those interested have not realised already, governments (and city councils) are very shy about ever disclosing the true costs of major capital projects, and often resort to obfuscation if not to plain misinformation to hide the real costs and consequences. Costs/prices in reports made public are normally redacted out, on the grounds of contract confidentiality. However, note that contract prices may eventually show up in project reports such as Business Plans (often of doubtful validity), in Hansards and even in budgets, if one can find them therein.

Another favourite trick is to falsely and deliberately use unduly high discount rates for PV calculations, to show a much lower sums of periodic, nominal costs than in reality. Whereas such discounting may have a proper place in the comparison of competing tenders, in using inflated discount rates (well above prevailing CPI rates – seven per cent used by ACT government), it has no valid place in estimating PVs for a project not subject to competition (like Canberra's light rail). In this case, it is the expected average contract escalation rates, over the life of the project, that should be used, if known, or of necessity, the average CPIs for project years involved. However, in this report, the average ABS CPI figure of three 3% per annum has been used for both PV calculations and the adjustment of these for inflation.

<sup>14</sup> The writer, in past years, also developed and used his proprietary model, being the *Automated Cost Risk Analysis Model (ACRAM)*©, which may be read about on his website [www.alogstudycentre.com.au](http://www.alogstudycentre.com.au). ACRAM achieved the same results as @Risk®.

<sup>15</sup> Both models catered for the following procedure: identify and cost each component; assign a probabilistic risk distribution (beta or triangle); assign min/max values to each cost component, assign correlations between pairs of cost components; run a Montecarlo or other form of simulation. Two types of runs should be made: one with correlation between all cost pairs and the other with no correlation between any cost pairs. The purpose of this is to compare the risk spreads of each, as added information to the decision maker. The plus and minus risk spread with correlation will always be greater than that done without correlation. Spreads (with correlation will normally be within minus 20% to plus 40% about the point estimate, whereas those done without correlation would be around minus 15% to plus 25%.



## ***SMART CANBERRA TRANSPORT (SCT)***

***[CANBERRA CAN DO BETTER]***

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Another trick is to exclude the scrutiny of independent peer reviews, in favour of in-house project staff or contractors happy to oblige in meeting the government remit, and the denial of estimates made by external sources.

### **Final Comments**

Estimates in this report are the last that will be made by Smart Canberra Transport and published on the Australian Logistics Study Centre (ALSC) website [www.alogstudycentre.com.au](http://www.alogstudycentre.com.au). True costs of Canberra's light rail will probably never be revealed by a Labor government, but could be exposed if Labor were to ever lose government. Of course, by then the ideological culprits will have left the financial wreckage behind them.

Sadly, readers can expect the government (and some light rail supporters) to deny or even reject outright the content of this report, but, in the best interests of ACT taxpayers, any such rejection should not be accepted by the public, let alone by the Media, without hard proof of error.

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25 June 2026



**DETAILED ESTIMATES (JUNE 2026)– CANBERRA LIGHT RAIL**

<b>Table A-1</b>			
<b>Light Rail Stage 1 Gungahlin-Civic</b>	<b>[0]</b>	Length	12Km
<b>Estimates</b>		Stations	13
<b>[revised to 2026 price basis]</b>		\$M/Km	56
<b>Stage 1 [0]</b>	<b>2016</b>	<b>2026</b>	<b>Notes</b>
<b>Gungahlin-Civic</b>	<b>\$B</b>	<b>\$B</b>	
<b>\$Cost-Nominal</b>	<b>1.780</b>	<b>2.474</b>	[1] [1A]
<b>\$PV(2016) (Discounted @ 3% pa)</b>	1.045		[2]
<b>Total Real Cost incl 20Y O&amp;M (to ACT Government)</b>	<b>1.367</b>	<b>1.900</b>	<b>[3]</b>
<b>Off-Contract Costs</b>	<b>0.697</b>	<b>0.969</b>	
ACT Capital Contribution	0.375	0.521	[4]
\$Interest (Cap Contribution) PV(2016)	0.247	0.343	[5] [5A]
Project Office costs (2014-2019)-Construction	0.025	0.035	[6]
Project Office costs (2019-2039)-O&M phase	0.050	0.070	[7]
<b>\$Cost-Contract (Build &amp; O&amp;M)</b>	<b>0.670</b>	<b>0.931</b>	
<b>\$Cost-Construction (Contractor)</b>	<b>0.446</b>	<b>0.620</b>	
\$Contractor portion	0.300	0.417	[8]
\$Interest (contract - \$300M) PV (2016)	0.146	0.203	[9] [10]
<b>\$Cost-O&amp;M (20Y)</b>	<b>0.224</b>	<b>0.311</b>	
O&M (2019-2039)	0.224	0.311	
<b>\$Contract Value-Construction</b>	<b>0.675</b>		[11]
\$Contractor portion	0.300		
ACT Capital Contribution	0.375		
<b>Inflation over 2016-2026</b>	<b>1.390</b>		[12]
<b>Notes:</b>			
0. Initiated 2014; Commissioned April 2019			
1. Nominal cost (2016) known from A-G Report on Stage 1, June 2016			
1A. Nominal cost is sum of expected cost projected for each and all project years			
2. \$Cost-Nominal discounted to 2016 base date			
3. Real costs are periodic costs discounted to a base date/year			
4. ACT Capital Contribution (\$375M of the \$675M) PV (2016)			
5. PV (2016) \$Int (Cap Cont) discount rate 3% pa for 20Y; \$Cap <b>not amortised</b>			
5A. \$Interest payment continues at \$15M pa, after 20Y O&M period			
6. Estimate of Project Office staff only costs (contract phase)			
7. Estimate of Project Office staff only costs (O&M) phase)			
8. Contractor stumps up only \$300M of \$675M plus interest.			
9. Contractor \$Interest at 5% for 20 years; PV at 3% pa to 2016; <b>amortised (over 20Y)</b>			
10. Gives \$146M interest (PV 2016) on \$300M over 20 years			
As determined by loan calculator and standard PV formulae			
11. \$675M is contract cost ; as released to public.			
12. Inflation 2016-2026, from annual, ABS CPI figures.			
But note that contract <b>escalation</b> cost always exceeds CPI figures			



# SMART CANBERRA TRANSPORT (SCT)

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Table A-2	Length (Km)	1.70	
Light Rail Stage 2A Civic-Regatta Point	Stations	3	
Estimates	\$M/Km	0.520	[1]
[revised to 2026 price basis]	Cost/Benefit	20%	[2]
Stage 2A Gungahlin-Civic	2023 \$B	2026 \$B	Notes
Nominal cost	na	na	
<b>Total Real Cost Actual including 20Y O&amp;M</b>	<b>1.817</b>	<b>2.285</b>	
<b>Construction-Total</b>	<b>1.599</b>	<b>2.028</b>	<b>[3]</b>
<b>Contract-Construction</b>	<b>0.884</b>	<b>1.184</b>	
Construction	0.577	0.822	[4] [5]
Financing & Interest	0.245	0.289	
Risk contingency and escalation allowances	0.062	0.073	
<b>Project Management</b>	<b>0.085</b>	<b>0.100</b>	
Project management, design, approvals, studies	0.050	0.059	[6]
Contractor preliminaries	0.035	0.041	
<b>Vehicles etc</b>	<b>0.240</b>	<b>0.283</b>	
Vehicles, depot, retrofits	0.150	0.177	
Battery retrofit	0.090	0.106	
<b>Related works &amp; costs</b>	<b>0.390</b>	<b>0.460</b>	[7]
Raising London Cct	0.130	0.153	[8]
Utility Relocations	0.110	0.130	
Bridge over Parkes Way	0.070	0.083	[9]
Power, signalling, communications and control systems	0.045	0.053	[9]
Landscaping, green track and urban realm works	0.035	0.041	[9]
<b>O&amp;M (20Y)[2030-2050]</b>	<b>0.218</b>	<b>0.257</b>	
O&M (2030 - 2050)	0.168	0.198	[10] [11]
Project Office O&M costs (2030-2050)	0.050	0.059	[12]
<b>Inflation rate 2023-2026</b>	<b>1.180</b>		[13]
<b>Notes:</b>			
1. Build cost Stage 2A at \$520M/Km is 54% more expensive per Km than average of Parramatta L1 and L2 (\$338M/Km)			
2. Cost/Benefit Ratio 0.2, per Auditor-General's report; therefore grossly wasteful			
3. Note that a Web reference cites \$1.46B as 20Y cost (2023)			
4. \$577M is <b>official published contract figure</b> (2023);			
5. ChatGPT figure 2025-26 cites \$0.822M; a 42% increase from 2023; PV 2023)			
6. Assumes 10 staff for 7 years			
7. Related works are those directly caused by and thus attributable to Stage 2A			
8. \$130M a published estimate (Web2026);			
9. ChatGPT data			
10. 20Y O&M costs at 29% of contract (\$577M);			
11. \$O&M St2A is relatively close to \$O&M for St1 give 1.7/12Km ratio of Stages			
12. Assumes five (5) officers dedicated to management of Stage 1 through life (20Y).			
13. 18% Inflation (2023-2026), from annual, ABS CPI figures.			



# SMART CANBERRA TRANSPORT (SCT)

[CANBERRA CAN DO BETTER]

Table A-3			Length (Km)	10.1
Light Rail Stage 2B Regatta Point-Woden			Stations	8
Estimates	50%	O&M(20Y)/Build Cost [1]	\$M/Km [1a]	448.39
[revised to 2026 price basis]	15%	Contingency [2]	Cost/Benefit	[2a]
Stage	Km	Work required	2026 Build Only \$M	Notes
<b>Stages 2B</b>				
<b>Total Real Cost Actual inc 20Y O&amp;M</b>			<b>6,893</b>	
<b>Stage 2B Construction - Total</b>			<b>4,529</b>	
<b>Stages 2B 20Y O&amp;M</b>			<b>2,364</b>	
O&M (2040 - 2070)			2,264	[3]
Project Office costs (2040-2070)			100	[4]
<b>Stage 2B Construction - Total</b>			<b>4,529</b>	
<b>Stage 2B Contingency</b>	<b>10.1</b>		<b>591</b>	[5]
<b>Stage 2B \$Real (2026)</b>			<b>3,938</b>	
Project Office & development costs			200	[6]
<b>\$Construction + \$Interest</b>			<b>3,738</b>	
\$Interest on Construction Cost			1,120	[6a]
<b>\$Construction</b>			<b>2,618</b>	
<b>Regatta Point to Comm Ave bridge</b>	<b>0.25</b>		<b>11</b>	
Earthworks (significant)			10	
Reworked intersection and traffic lights			1	
<b>Bridge across lake</b>	<b>0.4</b>		<b>280</b>	
Between existing Cth Ave bridges Steel construction (400m )		311 across water plus 50m each side for bridge terminals	280	[7]
<b>Lake to State Cct</b>	<b>1.25</b>		<b>134</b>	
Tunnel Cth Ave (after Coronation Dve)		Cut and cover	100	[8]
<b>1. Albert Hall Station</b>			14	[9]
Left side Cth Ave across to State Cir (300m)	0.3	Earthworks (significant)	20	[10]
<b>State Cct to Adelaide Ave</b>	<b>2.3</b>		<b>80</b>	
<b>2. Kings Ave station</b>		Intersection and lights	14	
<b>3. Sydney Ave station</b>		Intersection and lights	14	
To Canberra Ave		Intersection and lights	1	
<b>4. Melbourne Ave station</b>		Intersection and lights	1	
Up onto Adelaide Ave (centre)		Earthworks (significant)	50	
<b>Along centre of Adelaide Ave</b>	<b>2</b>		<b>70</b>	
To Hopetoun Cct bridge (Over)		Centre bridge span required	50	
<b>5. Hopetoun Cct Station</b>			15	
Footbridge/elevator access needed			5	
<b>Novar St/Kent St bridge (under)</b>			<b>25</b>	
Rework of bridge supports		Centre pillars	5	
<b>6. Kent St station</b>			15	
Footbridge/elevator access			5	
<b>Cotter Rd-Yarra Glen Interchange</b>				[10a]
Probable major works. To be decided		Funded separately to Stage 2B	-	
<b>Yarra Glen to Roundabout</b>	<b>2.45</b>		<b>35</b>	
Horse Paddock Station ???		Yet to be decided		[10b]
Carruthers St bridge		Rework of bridge pillars needed	15	[10c]
<b>7. Carruthers St Station</b>			15	
Footbridge/elevator access			5	
<b>Roadbed and rail</b>			<b>1,750</b>	
Roadbed earthworks		9.7 Km (10.1 less Cth Ave bridge)	50	
Railbed and rails		10.1Km	1,700	[11]
Signalling, communications; control systems			110	
<b>Across Yamba Dv roundabout</b>			<b>130</b>	
Earthworks		Earthworks (extensive)	30	[12]
Bridge	0.35	Bridging (extensive)	100	[13]
<b>Launceston St to Bradle St</b>	<b>0.5</b>		<b>103</b>	
Launceston St - rejig lights			1	
Bowes St - rejig lights		Intersection and lights	1	
Bradleys St - rejig lights		Intersection and lights	1	
<b>8. Town Centre Station</b>		Portion attributable to Tram	100	[14]



# SMART CANBERRA TRANSPORT (SCT)

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Notes: Table A-3												
1. O&M(20Y)/Build Cost Ratio is set here as 50% of build cost, due to complexity of route. Note that capital equipment projects, eg, weapons systems often exceed 100% of acquisition cost.												
1a. \$448M/Km (\$4,529M/10.1), is a bit less than for Stage 2A (\$520M/Km)												
2. Contingency 15%. Allows for estimating errors but not for possible overruns due to risk uncertainty. ChatGPT cites 14% contingency as about right for similar projects												
2a. A Cost-Benefit Ratio has not been published or mooted for St2B, but will be lucky to exceed 0.5, ie, highly inefficient.												
3. See Note 1												
4. Ongoing Project Office costs (2040-2070) assumes 10 staff full-time												
5. See Note 2												
6 Project Office & development costs for Stage 2B have been accumulating since 2016 and are very substantial. They would well exceed that for St1 and for St2A (2026 prices).												
6a. \$Interest on \$Construction (\$2,618M) borrowed @ 5% pa over 20 years; <b>amortised</b> All \$Construction and \$Interest recovered via periodic repayments over 20 years of O&M phase												
7. Estimated cost based on recent projects like the Molonglo Bridge. ChatGPT says \$450M but that is taken as dedicated bridge across lake; not allowed by NCA. A steel bridge between two spans of Cth Ave bridge now considered												
8. Estimated cost for the tunnel is based on published costings for cut and cover tunnels, but could prove to cost more												
9. Stations costed at \$14M, based on Mitchell cost of \$12M in 2022.												
10. All new earthworks needed for this part over 300 metres.												
10a. Not progressed yet but would be funded separately to Stage 2B anyway												
10.b. Yet to be decided; would involve another station												
10c. Bridge pillars in centre; to be relocated												
11. Cost of rail bed \$150M per Km; based on published cost for other projects \$63.25 for Stage 1 and huge cost demanded for St2A Cost \$M/Km for St1 is \$449M												
12. Crossing Yamba Dv roundabout (350m) involves major earthworks for bridge foundations.												
13. A 350m bridge required.												
14. \$100M of \$280M for new terminal attributed to Light Rail.												

Table A-4

Light Rail ACT

%Inflation by relevant years

Australia	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Notes
Year	1	2	3	4	5	6	7	8	9	10	11	
N Year												
%inflation (Y) CPI	1.30	1.90	1.90	1.60	1.00	2.86	6.60	5.60	3.60	3.80	3.70	[1]
Av %Inf	1.30	1.60	1.70	1.68	1.54	1.76	2.45	2.85	2.93	3.02	3.08	
2016-2026	1.0130	1.0322	1.0519	1.0687	1.0794	1.1102	1.1835	1.2498	1.2948	1.3440	1.39	[2]
2016-2023	1.0130	1.0322	1.0519	1.0687	1.0794	1.1102	1.1835	1.2498				[3]
2020-2026					1.0154	1.0333	1.0586	1.0887	1.1206	1.1544	1.19	[4]
2021-2026						1.0286	1.0965	1.1579	1.1996	1.2452	1.29	[5]
2023-2026								1.056	1.0940	1.1356	1.18	[6]
%Escalation Construction ACT	5	5	5	5	5	5	5	5	5	5	5	[7]
									1.050	1.103	1.158	

Notes:

1. ABS Consumer Price Index (CPI) figures
2. Applicable Stage 1 estimates
3. Applicable Stage 1 estimates
4. Applicable Stage 2B estimates; re Molonglo Bridge cost basis (2020-2026)
5. Applicable Stage 2B estimates; re Moraro Hy/Lanyon Dv flyover cost bases
6. Applicable Stage 2A estimates
7. Shows escalation percentages for construction in the ACT; applicable to all Stages.