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1 Executive Summary

1.1 Introduction

This Chapter presents a detailed analysis of the feasibility of the four rail Sub-Corridor Options identified in chapter 6: ***Route Options*** of this report. The analysis has been undertaken from three perspectives: as follows;

Analysis Perspective	Description
Government Budgetary	This analysis has been undertaken using a cost of Government Borrowing of 5.86%. It represents the net budgetary effect of the option if it was solely funded and operated by Government.
Commercial Feasibility	This analysis has been undertaken using a Weighted Average Cost of Capital of between 10-15% with a central estimate of 12.5%. It represents the commercial value of the option if it was funded and operated by the private sector
Wider Economic Cost / Benefit Position	This analysis has been undertaken using a Social time preference rate of 7% real. It represents the net wider economic cost/benefit position taking into account broader social consideration, positive and negative externalities.

The analysis is based on three key financial indicators. The key financial indicators involve:

Financial Indicator	Description
NPV Government Sponsorship	The NPV of the infrastructure upgrade cash flows assuming funding and ownership by the Government.
NPV Commercial Ownership	The NPV of the infrastructure upgrade cash flows assuming funding and ownership by professional private sector infrastructure owners.
NPV Cost/Benefit	The NPV of the infrastructure upgrade project from a wider perspective. Project will be broadly assessed for any external social, economic and environmental costs/benefits.

In completing the analysis, the Study Team has drawn on inputs derived from all stages of the review. The main inputs are cross referenced in the table below.

Chapter	Inputs to the Financial and Economic Assessment
Chapter 3 & 4 – Market Demand Assessment	Projected future rail freight demand on the upgraded route and the possible access price regimes that could be applied by the new route infrastructure owner.
Chapter 6 – Route Options Assessment	The four geographical Sub-Corridor Route Options available for an upgraded North/South route; and Likely improvements in train availability and reliability that would result from development from the various Sub-Corridor Route Options.
Chapter 5 –Infrastructure Requirements	The construction and maintenance costs that would apply to the Sub-Corridor Route Options identified in the Route options Assessment.

The Route Options Assessment identified a large number of possible route options presenting a risk that the whole project would fail to achieve its objectives if it produced results for many route variants without discrimination. To mitigate this risk the Study Team developed a pre-screening approach to select for financial analysis the more probable route options and access price scenarios having regard to engineering constraints, demand and infrastructure requirements. This was implemented by Hyder Consulting through a comprehensive Optimisation Model. The outputs from the Optimisation Model form the set of route options that have been subjected to financial analysis in this Chapter.

The aim of the financial analysis has been to assess the potential of the route option candidates and report on each option selected through the analysis performed by the Optimisation Model In completing the analysis, the Study Team has analysed a number of variables that have been identified as potentially having a significant negative impact on the viability of the North South Rail Corridor, principally the major capital and infrastructure investments including the construction of new track through the Toowoomba Ranges, major infrastructure improvements to help alleviate congestion north of Sydney and improvements to ease congestion through the Hunter / Maitland area.

1.2 Summary of Findings

The detailed result tables later in this chapter demonstrate that on the current range of revenue, and capital and operating expense projections, none of the route options evaluated can be considered financially attractive. This is not an unexpected result. The Corridor upgrades post 2009 do no more in economic terms than provide an alternative transport solution to the current road and rail network. Clearly for any such economic substitute asset to provide an appropriate return it must offer sufficient efficiency advantages to the current users of the existing assets such that they will switch to the new substitute, supplemented by any new freight generated. The flexibility and efficiency of the Australian road transport network and the increasing business reliance on Just In Time inventory methods provide a material challenge to alternative transport methods in generating cost/time efficiencies.

The results indicate that, while important, improving the quality of the rail infrastructure does not overcome the fundamental service efficiency differential, especially on the shorter Sydney-Melbourne and Sydney-Brisbane corridors which have the highest volumes of manufactured goods freight. The results also reflect that while generating additional freight (especially on the Melbourne-Brisbane route), to undertake a further significant Corridor upgrade requires a substantial capital cost not fully offset by the increased freight revenue.

The Study Team cautions against comparing the Net Present Value (NPV) results across the three analysis views. The significant differences in discount NPV results are largely a factor of the discount rates adopted. We note that the higher the discount rate:

- The lower the absolute value of the components that make up the NPV; and
- The smaller the range of the NPV results.

This means that more negative private NPV results are not due to any obvious inefficiency but are caused by the higher discount rate reducing the present value of the future cash flows proportionately more than the lower discount rate of the government analysis. The cost/benefit NPV results are generally better than private results at lower construction spends because the externalities effects outweigh the higher present value of the construction costs, but higher at the unconstrained capital spends because the externalities are not sufficient.

The financial analysis in this report has been performed on the forecast realistic case (Case A) demand modelling, not the optimistic case (Case B). The optimistic demand scenario does not result in switching of any negative NPV results to positive for the private sector viewpoint over the range of route options. Transactions will not obtain approval to progress past the feasibility study stage if they require optimistic revenues to produce positive NPV results. It is also the Study Team's experience that for infrastructure projects of the same scope and risk as the Corridor upgrades, Government Treasuries and debt lenders will base their view of the transaction on more conservative revenue estimates.

1.3 Commentary on Analysis Views

1.3.1 Government Budgetary Viewpoint

The negative NPVs demonstrate that all project configurations evaluated produce net budgetary deficits. Whilst there are a number of benefits associated with the establishment of a North-South Railway prima facie they are not sufficient to defray the substantial cost of construction and operation of a track and would not justify government investment on the direct project cash flows alone. The analysis performed includes the entire project term and individual government treasuries may take the view that a shorter budgetary cycle is a more appropriate analysis period. This would have the effect of significantly worsening the NPV results by removing the later positive cash flows from the analysis.

1.3.2 Cost Benefit Viewpoint

Governments generally do not intervene in efficient private markets via initiating and funding transactions unless:

- The transaction will generate significant net wider benefits; and
- These benefits would not be generated without government intervention.

The cost benefit analysis demonstrates that while improvements to the Corridor do generate material external benefits these are not sufficient to produce a net positive position under this analysis view. The fact that the key externalities derived from the improvements are proportionate to the rail traffic that switches from road to the improved Corridor implies that these benefits would be produced whether the infrastructure is government or privately funded.

1.3.3 Private Investment Viewpoint

The negative NPVs demonstrate that all project configurations evaluated would not provide viable investment opportunities to the private sector without external support. The amount of the negative NPV can be viewed as the scale of the support needed to transform a particular route project into a feasible privately funded transaction. As noted above the better NPVs for the private sector for the unconstrained cases are largely a factor of the discounting effects, rather than any clear private sector efficiency. It is likely that the extended construction periods and spend amounts of the unconstrained cases would pose material capacity issues if they were structured as single transactions.

2 Discussion of Results

2.1 Commentary

This section discusses the NPV results for the different options (the four route options each with a Shepparton or Albury variant). It is based on the economic cost/benefit results with a 7 per cent discount rate for the case where capital expenditure is constrained to $1.5 billion. $1.5 billion expenditure on each of the options would have different physical implications – it would produce basic inland lines or substantial further upgrades to lines that already exist.

All cases produce negative NPVs, especially the Coastal and Hybrid Sub-Corridors. The inland Sub-Corridors generate additional regional freight, whereas on the Coastal Sub-Corridor and most of the Hybrid Sub-Corridor there is little opportunity to benefit from these increased regional flows.

Of the inland routes, the Far Western one has a better NPV than the Central Inland one largely because it can attract more regional freight and for lesser cost can achieve slightly better operational performance.

The options with capital expenditure constrained to $1.5 billion have better NPVs than the options with higher capital expenditure, indicating that the additional construction cost would not have enough impact on operation costs or on revenues. In addition – for example, a targeted investment of up to $1.5 billion on the existing coastal route (beyond the current ARTC upgrade program), which would concentrate on relieving congestion in the area to the north of Sydney, could produce a better NPV than the $1.5 billion option.

2.2 Summary of Results of the Financial and Economic Assessment

Eight route sub-corridor options were analysed, with revenue based on Coastal Sub-Corridor access real prices ($2.65 per ’000 GTK in 2009).

This rate was used given the risks involved in speculating around road/rail price relativities over the study period and is a realistic forecast based on current rail access fees to ensure rail maintains its competitive position. Over time there may be scope for increased rail access prices once significantly improved level of rail performance is demonstrated to the market.

The NPV data for each route option case is illustrated below.

2.3 Far Western (Shepparton) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion*			
Construction	-1,414	-1,044	-1,170
Operating Cost	-942	-282	-420
Access Revenue	2,053	557	859
Externalities	0	0	639
Total	**-303**	**-769**	**-92**
Capital Cost $3 Billion*			
Construction	-1,892	-1,318	-1,509
Operating Cost	-841	-233	-359
Access Revenue	1,935	494	782
Externalities	0	0	588
Total	**-798**	**-1,057**	**-498**
Capital Cost Unconstrained			
Construction	-3,537	-2,261	-2,672
Operating Cost	-718	-176	-284
Access Revenue	1,770	407	674
Externalities	0	0	518
Total	**-2,485**	**-2,029**	**-1,764**

* Includes upgrade to standard gauge between Toowoomba and Brisbane but no tunnel between Gowrie and Grandchester

2.4 Far Western (Shepparton) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

Capital expenditure of $1.5 billion will not be sufficient to enable the construction of a Class 1 freight rail line. Major projects, including the Gowrie to Grandchester route option through the Toowoomba Ranges will not be possible within this budgetary constraint. This will result in a rail line that will be subject to significant speed restrictions in key sections that will adversely influence its operational viability. It will have a relatively poor linehaul transit time of 30.0 hours from Melbourne to Brisbane, higher in the reverse direction. When the PUD components are added this will result in an overall transit time that is not competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion will not be sufficient to enable the construction of a Class 1 freight rail line as at least $3.6 billion is required to complete construction of the route deviation through the Toowoomba ranges. As a result the capital spend on this Sub-Corridor is only $2.0 billion out of the allowable $3.0 billion budget producing a transit time of 27.1 hours, marginally competitive with road transport.

Unconstrained expenditure

Capital expenditure of around $3.6 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Shepparton) of 21.3 hours. This level of capital expenditure is the lowest for the four Sub-Corridors via Shepparton and will result in the fastest transit time due to the shorter distance covered by the Far Western Sub-Corridor.

Revenue Impacts

The Far Western Sub-Corridor benefits from additional regional freight flows, with the Shepparton alternative gaining marginally more regional freight by virtue of the anticipated additional Southern NSW and Northern Victorian traffic. The Shepparton route options have a number of characteristics that offset its better financial result compared to options via Albury:

- Much of the Shepparton alternative requires new construction, while the Albury alternative is already established and operable as a Class 1 freight rail line;
- The Shepparton route options are generally along existing reservations but will still require reconstruction of formations and full track construction, together with associated environmental and planning approvals; and
- The need for construction of the Shepparton options leaves limited funding within the $1.5 billion budget to allow for additional options to be considered. The Albury alternative therefore has greater opportunity for improved transit time through new capital projects.

2.5 Far Western (Albury) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,422	-990	-1,135
Operating Cost	-854	-237	-364
Access Revenue	1,987	507	803
Externalities	0	0	582
Total	**-289**	**-720**	**-114**
Capital Cost $3 Billion			
Construction	-2,878	-1,840	-2,174
Operating Cost	-750	-184	-297
Access Revenue	1,847	425	703
Externalities	0	0	528
Total	**-1,781**	**-1,598**	**-1,240**
Capital Cost Unconstrained			
Construction	-3,065	-1,959	-2,315
Operating Cost	-729	-178	-289
Access Revenue	1,811	417	689
Externalities	0	0	507
Total	**-1,983**	**-1,721**	**-1,408**

2.6 Far Western (Albury) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

As with the Shepparton option, capital expenditure of $1.5 billion will not be sufficient to enable the construction of a Class 1 freight rail line. Major projects, including the Gowrie to Grandchester route option through the Toowoomba Ranges will not be possible within this budgetary constraint. This will result in a rail line that will be subject to significant speed restrictions in key sections that will adversely influence its operational viability. It will have a linehaul transit time of 26.4 hours from Melbourne to Brisbane, higher in the reverse direction. When the PUD components are added this will result in an overall transit time that is marginally competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion is almost sufficient to enable the construction of a Class 1 freight rail line as around $3.1 billion is required to complete construction of the route deviation through the Toowoomba Ranges.

Unconstrained expenditure

Capital expenditure of around $3.1 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Albury) of 20.6 hours. This level of capital expenditure is the lowest for the four Sub-Corridors via Albury and will result in the fastest transit time due to the shorter distance covered by the Far Western Sub-Corridor.

2.7 Central Inland (Shepparton) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,423	-1,051	-1,178
Operating Cost	-889	-267	-397
Access Revenue	1,581	428	661
Externalities	0	0	620
Total	**-730**	**-889**	**-294**
Capital Cost $3 Billion			
Construction	-2,874	-1,945	-2,252
Operating Cost	-761	-201	-315
Access Revenue	1,492	365	589
Externalities	0	0	582
Total	**-2,144**	**-1,781**	**-1,396**
Capital Cost Unconstrained			
Construction	-7,738	-3,964	-5,055
Operating Cost	-521	-95	-174
Access Revenue	1,176	212	388
Externalities	0	0	429
Total	**-7,084**	**-3,847**	**-4,412**

2.8 Central Inland (Shepparton) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

Capital expenditure of $1.5 billion will not be sufficient to enable the construction of a Class 1 freight rail line. Major projects, including the Gowrie to Grandchester route option through the Toowoomba Ranges will not be possible within this budgetary constraint. This will result in a rail line that will be subject to significant speed restrictions in key sections that will adversely influence its operational viability. It will have a poor linehaul transit time of 31.9 hours from Melbourne to Brisbane, and 31.7 hours in the reverse direction. When the PUD components are added this will result in an overall transit time that is not competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion will not be sufficient to enable the construction of a Class 1 freight rail line. Expenditure of at least $5.0 billion is required to complete construction of the route deviation through the Toowoomba Range. It will have a linehaul transit time of 28.8 hours from Melbourne to Brisbane, and 28.6 hours in the reverse direction, providing an outcome that at best is likely to be only marginally competitive with road.

Unconstrained expenditure

Capital expenditure of around $8.5 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Shepparton) of 24.5 hours. This is the third fastest Shepparton outcome behind the Far Western and the Coastal Sub-Corridors.

Revenue Impacts

The Central Inland Sub-Corridor options benefit from additional regional freight flows, with the Shepparton alternative gaining marginally more regional freight by virtue of the anticipated additional Southern NSW and Northern Victorian traffic. As with the Far Western Sub-Corridor, the Shepparton route options have a number of characteristics that offset its better financial result compared to options via Albury:

- Much of the Shepparton alternative requires new construction, while the Albury alternative is already established and operable as a Class 1 freight rail line;
- The Shepparton route options are generally along existing reservations but will still require reconstruction of formations and full track construction, together with associated environmental and planning approvals; and
- The need for construction of the Shepparton options leaves limited funding within the $1.5 billion budget to allow for additional options to be considered. The Albury alternative therefore has greater opportunity for improved transit time through new capital projects.

2.9 Central Inland (Albury) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,433	-998	-1,143
Operating Cost	-814	-226	-347
Access Revenue	1,572	401	636
Externalities	0	0	597
Total	**-675**	**-823**	**-258**
Capital Cost $3 Billion			
Construction	-2,876	-1,946	-2,253
Operating Cost	-767	-202	-318
Access Revenue	1,530	374	604
Externalities	0	0	577
Total	**-2,113**	**-1,774**	**-1,389**
Capital Cost Unconstrained			
Construction	-7,333	-3,839	-4,861
Operating Cost	-541	-101	-182
Access Revenue	1,216	222	405
Externalities	0	0	428
Total	**-6,658**	**-3,718**	**-4,210**

2.10 Central Inland (Albury) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

As with the Shepparton option, capital expenditure of $1.5 billion will not be sufficient to enable the construction of a Class 1 freight rail line. Major projects, including the Gowrie to Grandchester route option through the Toowoomba Ranges will not be possible within this budgetary constraint. This will result in a rail line that will be subject to significant speed restrictions in key sections that will adversely influence its operational viability. It will have a linehaul transit time of 28.6 hours from Melbourne to Brisbane, and 28.1 hours in the reverse direction. When the PUD components are added this will result in an overall transit time that is barely competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion will not be sufficient to enable the construction of a Class 1 freight rail line as at least $3.5 billion is required to complete construction of the route deviation through the Toowoomba ranges. As a result the capital spend on this Sub-Corridor of $3.0 billion produces a transit time of 27.8 hours only marginally better than the $1.5 billion spend.

Unconstrained expenditure

Capital expenditure of around $8.0 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Albury) of 23.7 hours. This is the third fastest Albury outcome behind the Far Western and the Coastal Sub-Corridors.

2.11 Coastal (Shepparton) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,435	-999	-1,145
Operating Cost	-812	-241	-361
Access Revenue	1,277	344	532
Externalities	0	0	693
Total	**-970**	**-896**	**-280**
Capital Cost $3 Billion			
Construction	-2,875	-1,946	-2,252
Operating Cost	-778	-226	-341
Access Revenue	1,296	343	534
Externalities	0	0	677
Total	**-2,358**	**-1,829**	**-1,382**
Capital Cost Unconstrained			
Construction	-9,264	-4,294	-5,653
Operating Cost	-489	-110	-182
Access Revenue	1,095	242	404
Externalities	0	0	510
Total	**-8,658**	**-4,161**	**-4,920**

2.12 Coastal (Shepparton) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.
-

$1.5 billion Capital Spend

Capital expenditure of $1.5 billion will only marginally enhance the operation of the existing coastal route, adding to the value of the current ARTC investment and providing a more efficient Class 1 freight rail line. It will have a linehaul transit time of 27.0 hours from Melbourne to Brisbane, and 27.4 hours in the reverse direction. When the PUD components are added this will result in an overall transit time that is only marginally competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $2.4 billion will produce a linehaul transit time of 26.5 hours from Melbourne to Brisbane, and 26.8 hours in the reverse direction, again providing an outcome that is more competitive with road, but not significantly better than the $1.5 billion capital spend.

Unconstrained expenditure

Capital expenditure of around $10.7billion will be required to achieve the fastest transit time possible across the Sub-Corridor (via Shepparton) of 22.4 hours. This is the second fastest Shepparton outcome behind the Far Western Sub-Corridor.

Revenue Impacts

The Coastal Sub-Corridor options do not benefit from the regional freight flows in the same way as the Far Western, Central Inland and Hybrid Sub-Corridors. However, the Shepparton route options have a number of characteristics that offset its better financial result compared to options via Albury:

- Much of the Shepparton alternative requires new construction, while the Albury alternative is already established and operable as a Class 1 freight rail line;
- The Shepparton route options are generally along existing reservations but will still require reconstruction of formations and full track construction, together with associated environmental and planning approvals; and
- The need for construction of the Shepparton options leaves limited funding within the $1.5 billion budget to allow for additional options to be considered. The Albury alternative therefore has greater opportunity for improved transit time through new capital projects.

2.13 Coastal (Albury) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,435	-1,000	-1,145
Operating Cost	-881	-260	-389
Access Revenue	1,445	387	600
Externalities	0	0	683
Total	**-872**	**-873**	**-251**
Capital Cost $3 Billion			
Construction	-2,870	-1,942	-2,248
Operating Cost	-845	-244	-368
Access Revenue	1,482	389	608
Externalities	0	0	666
Total	**-2,233**	**-1,797**	**-1,342**
Capital Cost Unconstrained			
Construction	-8,924	-4,215	-5,517
Operating Cost	-562	-128	-211
Access Revenue	1,318	293	488
Externalities	0	0	510
Total	**-8,167**	**-4,050**	**-4,729**

2.14 Coastal (Albury) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

As with the Shepparton option, capital expenditure of $1.5 billion will further enhance the existing Class 1 freight rail line along the existing coastal route. It will have a linehaul transit time of 26.0 hours from Melbourne to Brisbane, and the same in the reverse direction. When the PUD components are added this will result in an overall transit time that is marginally competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion will produce a linehaul transit time of 25.5 hours each way making the route more competitive with road.

Unconstrained expenditure

Capital expenditure of around $10.2 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Albury) of 21.6 hours. This is the second fastest Albury outcome behind the Far Western Sub-Corridor.

Interpretation of Coastal Sub-Corridor results

In interpreting the results from a wider national perspective rather than a specific project perspective, an adjustment is needed to allow for the negative impact on the Coastal Sub-Corridor of diverting freight (to an inland Sub-Corridor) that the coastal Sub-Corridor is capable of carrying (assuming that the capital spend substantially eases the congestion problems north of Sydney). With some of the infrastructure costs being fixed in nature, the diversion of revenue would make the Coastal Sub-Corridor less profitable than it would have been otherwise. A broad estimate of this effect is that an inland route makes the NPV of a coastal route worse in the order of $55 million (economic cost-benefit perspective) or $125 million (government perspective).

2.15 Hybrid (Shepparton) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,433	-998	-1,143
Operating Cost	-850	-237	-363
Access Revenue	1,310	333	528
Externalities	0	0	665
Total	**-973**	**-901**	**-313**
Capital Cost $3 Billion			
Construction	-2,870	-1,942	-2,248
Operating Cost	-778	-206	-323
Access Revenue	1,272	311	501
Externalities	0	0	644
Total	**-2,377**	**-1,838**	**-1,426**
Capital Cost Unconstrained			
Construction	-6,387	-3,499	-4,363
Operating Cost	-566	-113	-199
Access Revenue	1,066	206	367
Externalities	0	0	513
Total	**-5,887**	**-3,406**	**-3,682**

2.16 Hybrid (Shepparton) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

Capital expenditure of $1.5 billion will improve the inland components of the Hybrid Sub-Corridor and further enhance the north coast line to Brisbane as a Class 1 freight rail line. It will have a linehaul transit time of 30.2 hours from Melbourne to Brisbane, and 30.5 hours in the reverse direction due to the longer travel distance compared to the other Sub-Corridors. When the PUD components are added this will result in an overall transit time that is not competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion will produce a linehaul transit time of 28.4 hours from Melbourne to Brisbane, and 28.7 hours in the reverse direction, again providing an outcome that is not competitive with road.

Unconstrained expenditure

Capital expenditure of around $6.8 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Shepparton) of 26.4 hours. This is the slowest of the Shepparton outcomes.

Revenue Impacts

The Hybrid Sub-Corridor options benefit from additional regional freight flows, with the Shepparton alternative gaining marginally more regional freight by virtue of the anticipated additional Southern NSW and Northern Victorian traffic. However, it will not achieve the same outcomes as the Far Western and the Central Inland Sub-Corridors for the northern New South Wales regions. As with the Far Western Sub-Corridor, the Shepparton route options have a number of characteristics that offset its better financial result compared to options via Albury:

- Much of the Shepparton alternative requires new construction, while the Albury alternative is already established and operable as a Class 1 freight rail line;
- The Shepparton route options are generally along existing reservations but will still require reconstruction of formations and full track construction, together with associated environmental and planning approvals; and
- The need for construction of the Shepparton options leaves limited funding within the $1.5 billion budget to allow for additional options to be considered. The Albury alternative therefore has greater opportunity for improved transit time through new capital projects.

2.17 Hybrid (Albury) Sub-Corridor - $M

Infrastructure Costs	Government	Private	Economic Cost/Benefit
Capital Cost $1.5 Billion			
Construction	-1,426	-993	-1,138
Operating Cost	-843	-234	-360
Access Revenue	1,420	360	572
Externalities	0	0	666
Total	**-850**	**-867**	**-260**
Capital Cost $3 Billion			
Construction	-2,878	-1,947	-2,254
Operating Cost	-781	-206	-324
Access Revenue	1,374	334	540
Externalities	0	0	640
Total	**-2,285**	**-1,819**	**-1,398**
Capital Cost Unconstrained			
Construction	-5,981	-3,355	-4,150
Operating Cost	-600	-126	-216
Access Revenue	1,188	239	418
Externalities	0	0	529
Total	**-5,393**	**-3,242**	**-3,419**

2.18 Hybrid (Albury) Sub-Corridor

The NPV results demonstrate that this option is not financially attractive under any of the analysis views. The results degrade with the capital spending amount because of two factors:

- The greater the construction spend the longer the delay in generating significant revenue from the upgrade; and
- The relative inelasticity of the freight flows to marginal quality increases once the route is established.

$1.5 billion Capital Spend

As with the Shepparton option, capital expenditure of $1.5 billion will improve the inland components of the Hybrid Sub-Corridor and further enhance the north coast line to Brisbane as a Class 1 freight rail line. It will have a linehaul transit time of 28.7 hours from Melbourne to Brisbane, and the same in the reverse direction. When the PUD components are added this will result in an overall transit time that is not competitive with the road transport alternatives.

$3.0 billion Capital Spend

Capital expenditure of $3.0 billion will produce a linehaul transit time of 27.4 hours each way that will still not produce a route that is competitive with road.

Unconstrained expenditure

Capital expenditure of around $6.3 billion will be required to achieve the fastest possible transit time possible across the Sub-Corridor (via Albury) of 25.7 hours. This is the slowest of the Albury outcomes.

Interpretation of Hybrid Sub-Corridor results

In practice the results would be worse than those shown to the extent that North-South trains added to congestion in the heavily used Hunter Valley area, especially as North-South trains pay lower access charges than coal trains**.**

3 Methodology

3.1 Primary Analysis Measures

3.1.1 Net Present Value

The primary analysis metric used to assess the feasibility of the Sub-Corridor Route Options is Net Present Value (NPV). NPV's have been calculated by projecting the expected risk adjusted nominal cash flows incorporating expected inflation and then discounting these fees using the appropriate discount rate. NPV is a widely accepted and easily performed financial analysis tool used to summarise cash flow time series by both governments and the private sector. The NPV of a cash flow time series is calculated as follows:

$NPV = \Sigma C_n * V^n$

C_n = the cash flow in period n

V^n = the discount factor applying in period n

3.1.2 Analysis Views

As noted above the analysis performed in this module produces three separate views of the project cash flows, with all views constrained by one key requirement that any freight operator using the railway must be able to generate a commercial return from the freight traffic he assigns to the upgraded North South Rail Route. At the heart of the financial analysis performed for each view and each route is a broad 'sanity' check on the results of the freight operators on the route.

The following paragraphs summarise the differences in each of the analysis views calculated:

3.1.2.1 Government Budgetary Effect

This analysis views the upgrade project as one undertaken by the Federal Government as a project of social significance and thus appropriately funded by Government borrowing. Under this approach the discount rate used to determine the financial feasibility to the Government of a route option is the Government cost of debt.

A positive NPV for a route option indicates that the option is self funding, and thus produces a budgetary surplus; conversely a negative NPV indicates the project requires additional government funding and thus a budgetary deficit.

3.1.2.2 Commercial Feasibility

The private sector will view a route option as commercially feasible if it produces a return to the private operator commensurate with the market view of the project risks. Therefore the private sector discount rate is in effect the return required by the private sector taking into account the project risks. The appropriate discount rate for this analysis is the Weighted Average Cost of Capital ("WACC") that potential investors would be applying to evaluate whether they will invest in the transaction (Refer to appendix 2 for the determination of the WACC assumptions that we have adopted for this analysis).

A positive NPV using the private sector WACC indicates that a route option would attract private investors without any external contribution; a negative NPV indicates that a route option is not a viable private sector project. The size of the negative NPV can be viewed as an indication of the scale of external contribution that would be required to attract private investment. Such a contribution could be in the form of direct cash flow subsidy or changes to regulations that reduce the risk profile of the project and thus reduce the WACC.

3.1.2.3 Economic Cost Benefit

Economic cost benefit analysis views the project in a wider context and asks the question: does the project produce a net benefit to Australia as a whole when we consider any indirect economic, social or environmental benefits. This is measured by the cost/benefit ratio, a ratio greater than one indicating the project produces net overall benefits, however we note that because of the difficulty in accurately measuring indirect effects a ratio of 1.5 is usually taken as the minimum to indicate a materially beneficial project.

The discount rate used in calculating this ratio is known as the social time preference discount rate, and estimated by economists as the rate that mimics the choices made by the general public in assessing the value of competing projects with differing social effects.

There are economic costs and benefits that are expected to fall outside the sphere of the project-specific cost benefit analysis provided here. The Study Team has considered these (indirect) costs and benefits in a qualitative context. The indirect costs and benefits of significant improvements to the current structure of the interstate rail network include the net economic network effects and the economy-wide benefits of lower transport costs (Appendix 4). The following points support the method used to assess the economic costs and benefits of the proposed route options:

- The value of an improved interstate rail network provides more freight flow options for all users
- All direct costs and benefits from the development and operation of a new route option have been quantified, and
- Other benefits of an improved interstate rail network are complex to assess in a quantitative context.

3.2 Assumptions and Inputs

3.2.1 Assumptions Supplied

The Optimisation Model described in chapter 6 has been used to provide the following key inputs for the financial analysis:

- Real route construction, maintenance and operating costs;
- Real revenue derived by the infrastructure operating from access charges applied to the freight operators; and
- Real revenues and costs incurred by the set of freight operators assumed to be using the route under analysis.

3.2.2 Additional Assumptions

The following key assumptions have been set outside the Optimisation Model:

3.2.2.1 Regional Rail Freight Flows

ACILTasman have provided projections on the enhanced regional (as distinct from end-to-end) freight movements that improvement of the North/South corridor may trigger. ACILTasman provided estimates of the additional access revenue that would accrue to the infrastructure owner, including that driven by increased coal flows from the Surat Basin, and Hyder provided broad estimates of the marginal operating and maintenance costs that would be incurred for the increased usage.

3.2.2.2 Building Price Indexation

Ernst & Young are involved in the business case processes for a number of complex transport infrastructure projects where the outlook for construction cost inflation has been considered in detail. These processes have come to the view that the level of committed construction activity is high enough to produce possible capacity issues for the Australian market. This produces the very real risk that construction costs will suffer demand pull inflation in excess of general inflation factors. Consistent with this assumption, a differential inflation assumption for construction costs has been adopted. The central estimate of the Building Price Indexation rate has been set at 6.17% per annum.

3.2.2.3 CPI

The recent action by the Reserve Bank in raising interest rates indicates the strength of the Bank's commitment to keeping CPI within the 2-3% band targeted. There is no reason to diverge from the current Treasury projection of 2.75% as an appropriate value for the long term level of general inflationary pressure in the economy.

3.2.2.4 Income Taxation

From a theoretical valuation viewpoint an NPV analysis performed on pre-tax cash flows using a pre-tax discount rate will be just as valid as one performed on after-tax cash flows with an after-tax discount rate. Practically income tax effects only need to be included in the analysis if they substantially distort the investment decision process that private investors would apply in considering the rail link.

Ernst &Young are aware of the financial structures utilised in a number of private sector owned public transport infrastructure projects and note that none have demonstrated any difficulty in arriving at an income tax treatment that does not distort the basic economic feasibility of the project. Accordingly, the analysis has been performed on the pre-tax cash flows using pre-tax discount rates.

3.2.2.5 GST

The Study Team has assumed that GST does not impose a net cash cost on the project cash flows at the level of the infrastructure owner and freight operator. To firms at this level GST is largely a pass through impost with minimal timing impact over a full year.

3.2.2.6 Economic Cost Benefit Externalities

The Study Team has considered the range of indirect costs and benefits reflect that could be derived by the community and wider economy from the project and has concluded:

- There are only modest quantifiable social costs or benefits that would be attributable to the proposed upgrades of the North South Rail Corridor. Although there would be employment and local business benefits during the construction period, the ongoing benefits would be minor as most of the freight is either end-to-end or a diversion of regional freight from other rail services. There would be some potential increase in employment in the coal mining industry in the Surat basin.
- BTRE has produced research analysing the reduction in traffic accidents that result from increasing the proportion of freight using rail rather than road. BTRE estimated the wider economic cost savings that result from each net tonne kilometre of freight that uses rail instead of road. The factor calculated by BTRE has been adjusted to 2006 dollars and included in the calculation of externalities.
- BTRE has also produced estimates of the reduction in greenhouse gas emissions that result from freight going via rail instead of road. BTRE calculated an estimate of the net economic benefit resulting from each net tonne kilometre of freight that uses rail instead of road. The factor calculated by BTRE has been adjusted to 2006 dollars and included in the calculation of externalities.

The Study Team has not identified any other significant external factor that will produce net economic distortions to the project cash flows produced from the Optimisation Model. The externality amounts we have calculated should be viewed as upper bounds as we have assumed that all end-to-end tonnage is the result of modal shift to rail.

3.2.2.7 Discount Rate Assumptions

As noted above the each of analysis views imply the need for a different discount rate to assess route feasibility. The following discount rates have been applied:

- Government discount rate equal to the 10 year Federal Government Bond rate – central estimate 5.86%
- Private sector discount rate (see appendix 2)– central estimate 12.5%
- Real social time preference discount rate – 7% real

3.3 Sensitivity Analysis

3.3.1 Background

The purpose of performing sensitivity analysis during financial modelling is to augment the information produced by providing meaningful ranges for the key results. The Study Team believe that the variations in input assumptions made as part of a sensitivity analysis should be based on realistic views on the likely extreme values of the assumptions. An approach of simply applying a percentage change up and down to every variable does not provide a meaningful set of numbers. The key assumptions for the financial analysis step have been reviewed by the Study Team and set out below together with sensitivity analysis where appropriate.

3.3.1.1 Optimisation Model Outputs

The input parameters to the financial modelling that are direct outputs from the Optimisation Model have already been subject to extensive risk and scenario analysis. Further sensitivity adjustments to these values are not likely to provide useful information to the reader of this section of the report.

3.3.1.2 Discount Rates and CPI

All financial discount rates include an element of compensation for the effect of devaluation of the money supply on the nominal cash flows received. The implication of this is that it is inconsistent to perform sensitivity analysis on CPI assumptions without making an identical adjustment to the discount rates. If it is assumed that all cash flows being discounted are also being indexed by a CPI factor then the nominal NPV is not sensitive to CPI changes. That is the case in this analysis and thus we will not being running CPI sensitivities.

3.3.1.3 Discount Rates and Real Interest Assumptions

The other component of the interest factors inherent in financial discount rates is denoted the "real interest rate". This factor represents the market view of the general level of credit quality and financial market stability and is not generally considered to be dependent on CPI. As a result sensitivities on discount rates via adjustment of the real interest rate component produce useful information on the nominal value of cash flows to different investor classes. The real rate in the Australian economy has tended to vary in a 2% range and thus we have included sensitivities of +/-1% in the setting the central estimate of the government discount rate.

3.3.1.4 Economic Cost Benefit Discount Rate

There is considerable discussion on what rate Governments should use to evaluate the wider effects of infrastructure projects. The UK Treasury has recently suggested that 3% real, that is a rate more closely aligned with the cost of government debt, would be an appropriate alternative to the 7% real, social time preference rate. The UK transactions to which this rate is to be applied generally do not involve the government accepting systematic risk and that the Australian market is in general agreement that where governments do accept systematic risk in sponsoring transactions they are entitled to returns commensurate with those sought in the private sector. Sensitivities on the economic cost benefit NPV at the 3% discount rate have been included to illustrate the difference this produces in viewing the transaction benefit results.

3.3.1.5 WACC Range

Appendix 2 sets out the derivation of the appropriate WACC range used in valuing the infrastructure cash flows from a private sector viewpoint.

3.3.1.6 Building Price Index

As noted above there is continuing evidence that the large scale infrastructure construction market will increasingly meet capacity constraints in the next 10-15 years. The likely effect of this is that building costs will experience significant inflationary pressures during this period. Given the considerable uncertainty in the market over a "best" estimate for the rate of cost increase the Study Team has adopted a stochastic approach to analysing the effect of this parameter. Data indicates that the BPI is unlikely to fall below CPI and that a reasonable upper bound for BPI over the medium term is 10%. BPI has been defined as a triangular distribution with minimum value 2.5%, most likely value 6% and the maximum value 10%.

See appendix 3 for a brief introduction to triangular distributions.

3.4 The Project Cash Flow Structure

The actual cash flow structure modelled is straight forward, creating yearly nominal inflows and outflows for the infrastructure owner and the freight operators. The economic externalities are only included in the cost benefit analysis. In simple terms the following commercial relationships hold:

3.4.1 Infrastructure Owner

It is assumed that the Infrastructure owner will generate revenue by charging the train operator a market-based access charge to use the infrastructure - a charge per train kilometre and a charge per gross tonne kilometre.

The infrastructure owner will have the following costs:

- Costs associated with constructing the railway;
- Costs associated with operating the railway; and
- Costs associated with maintaining the railway.

3.4.2 Train Operator

The train operator will generate revenue by hauling goods over the infrastructure for its customers. The Optimisation Model generates throughput and revenue from six different general classes of freight.

High level assumptions of the freight operator's costs have been used. The following business costs have been assumed for the freight operator:

- Operating Costs; and
- Maintenance Costs.

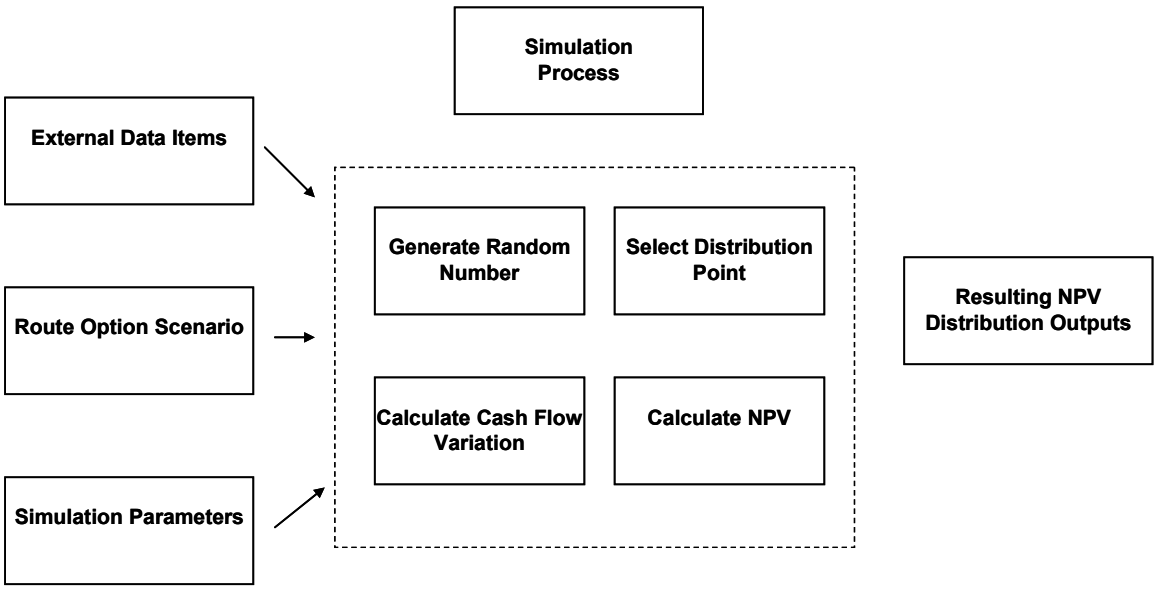
The access revenue derived by the infrastructure is assumed to flow through to the train operator as a direct cost.

3.5 Calculation Processing

The NPV calculations have been produced by simulation analysis, summarised as follows:

- The non stochastic data items set;
- The simulation package generates values for the stochastic variables;
- The NPV results are recorded by the simulation package;
- The simulation package checks for statistical convergence and if this has not occurred, generates new stochastic variable values;
- Once convergence is reached, the simulation process is terminated and the distributional outputs presented.

This is illustrated in the following diagram:



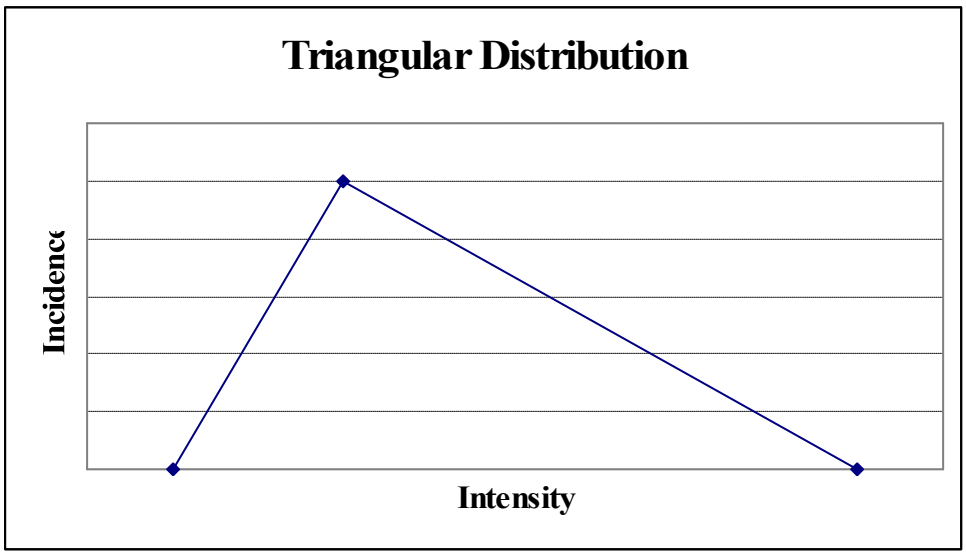
3.6 Stochastic NPV Distributions

Simplicity is the key to turning the raw data into usable stochastic distributions. The Study Team's experience is that the majority of risk events can be adequately modelled using one general distribution, the triangular distribution.

The triangular distribution requires only three parameters to define it, two sets are usually used, either:

- Minimum value, maximum value and most likely value; or
- 95th percentile, most likely and 5th percentile.

Thus to create a triangular distribution sufficient data is needed to estimate either of three sets of data above. The more data available, the more reliable the estimates of the percentile values and thus use the second formulation. The first formulation is very useful where there is little reliable data but Study Team members have extensive experience – the Study Team's view on "the worst possible", "best possible" and "expected outcome" can be easily turned into a triangular distribution.



4 Full Table of Results

This section provides results for each of the eight route options when sensitivity analysis is undertaken on BPI, government discount rate, private sector discount rate and social preference rate.

The most significant changes occur in the social time preference analysis. The change from 7% to 3% produces a positive NPV numbers for a wide range of route options under the $1.5 billion cost restriction. It is the Study Team's view that this effectively has the Federal Government accepting full market risk on the access revenue as a method of generating the externality benefits. This is not an appropriate stance to take as the externality benefits would likely occur whether the project is sponsored by the private sector or the government. Extreme caution should be exercised in viewing the positive NPVs that result from this sensitivity case as evidence of overall economic feasibility.

The table below illustrates the variables changed for each case illustrated in the sensitivity tables.

	Government	Private	BPI	Social Time
Case 1	4.86%	10.00%	3.65%	n/a
Case 2	5.86%	12.50%	3.65%	n/a
Case 3	6.86%	15.00%	3.65%	n/a
Case 4	4.86%	10.00%	6.17%	n/a
Case 5	5.86%	12.50%	6.17%	n/a
Case 6	6.86%	15.00%	6.17%	n/a
Case 7	4.86%	10.00%	8.77%	n/a
Case 8	5.86%	12.50%	8.77%	n/a
Case 9	6.86%	15.00%	8.77%	n/a
Case 10	n/a	n/a	3.65%	7.00%
Case 11	n/a	n/a	3.65%	3.00%
Case 12	n/a	n/a	6.17%	7.00%
Case 13	n/a	n/a	6.17%	3.00%
Case 14	n/a	n/a	8.77%	7.00%
Case 15	n/a	n/a	8.77%	3.00%

Far West Sub-Corridor (Shepparton) - $1.5 Billion															
Infrastructure Costs	**Case 1**	**Case 2**	**Case 3**	**Case 4**	**Case 5**	**Case 6**	**Case 7**	**Case 8**	**Case 9**	**Case 10**	**Case 11**	**Case 12**	**Case 13**	**Case 14**	**Case 15**
Government															
Construction	-1,347	-1,284	-1,226	-1,482	-1,414	-1,349	-1,634	-1,558	-1,486	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,196	-942	-755	-1,196	-942	-755	-1,196	-942	-755	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,648	2,053	1,619	2,648	2,053	1,619	2,648	2,053	1,619	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	105	-174	-361	-31	-303	-484	-182	-447	-622	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,061	-949	-852	-1,167	-1,044	-936	-1,286	-1,149	-1,030	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-416	-282	-202	-416	-282	-202	-416	-282	-202	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	850	557	387	850	557	387	850	557	387	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-627	-675	-667	-733	-769	-751	-851	-875	-845	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,064	-1,286	-1,170	-1,415	-1,289	-1,560
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-420	-948	-420	-948	-420	-948
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	859	2,066	859	2,066	859	2,066
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	639	1,704	639	1,704	639	1,704
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14	1,536	-92	1,407	-211	1,263

Far West Sub-Corridor (Shepparton) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,776	-1,678	-1,587	-2,003	-1,892	-1,788	-2,263	-2,137	-2,019	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,078	-841	-667	-1,078	-841	-667	-1,078	-841	-667	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,513	1,935	1,515	2,513	1,935	1,515	2,513	1,935	1,515	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-342	-585	-740	-569	-798	-941	-829	-1,043	-1,171	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,338	-1,172	-1,032	-1,505	-1,318	-1,158	-1,696	-1,484	-1,303	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-355	-233	-162	-355	-233	-162	-355	-233	-162	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	774	494	334	774	494	334	774	494	334	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-919	-912	-860	-1,086	-1,057	-986	-1,278	-1,223	-1,131	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,342	-1,681	-1,509	-1,895	-1,702	-2,140
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-359	-847	-359	-847	-359	-847
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	782	1,948	782	1,948	782	1,948
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	588	1,605	588	1,605	588	1,605
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-330	1,025	-498	811	-690	566

Far West Sub-Corridor (Shepparton) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-3,250	-3,029	-2,827	-3,800	-3,537	-3,297	-4,460	-4,147	-3,861	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-935	-718	-560	-935	-718	-560	-935	-718	-560	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,326	1,770	1,368	2,326	1,770	1,368	2,326	1,770	1,368	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,859	-1,977	-2,019	-2,409	-2,485	-2,489	-3,069	-3,096	-3,053	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-2,290	-1,951	-1,672	-2,661	-2,261	-1,933	-3,105	-2,631	-2,242	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-281	-176	-116	-281	-176	-116	-281	-176	-116	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	666	407	264	666	407	264	666	407	264	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,905	-1,720	-1,525	-2,277	-2,029	-1,785	-2,721	-2,399	-2,095	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2,299	-3,035	-2,672	-3,544	-3,118	-4,156
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-284	-723	-284	-723	-284	-723
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	674	1,783	674	1,783	674	1,783
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	518	1,477	518	1,477	518	1,477
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,391	-499	-1,764	-1,008	-2,210	-1,619

Far West Sub-Corridor (Albury) - $1.5 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,335	-1,262	-1,193	-1,506	-1,422	-1,344	-1,701	-1,606	-1,517	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,095	-854	-677	-1,095	-854	-677	-1,095	-854	-677	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,581	1,987	1,555	2,581	1,987	1,555	2,581	1,987	1,555	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	151	-129	-315	-20	-289	-466	-216	-473	-639	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,005	-881	-776	-1,131	-990	-871	-1,275	-1,115	-980	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-360	-237	-164	-360	-237	-164	-360	-237	-164	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	794	507	343	794	507	343	794	507	343	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-571	-611	-597	-697	-720	-692	-841	-845	-801	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,008	-1,264	-1,135	-1,424	-1,279	-1,609
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-364	-859	-364	-859	-364	-859
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	803	2,001	803	2,001	803	2,001
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	582	1,586	582	1,586	582	1,586
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	1,463	-114	1,303	-258	1,118

Far West Sub-Corridor (Albury) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,645	-2,465	-2,300	-3,092	-2,878	-2,682	-3,629	-3,375	-3,141	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-977	-750	-585	-977	-750	-585	-977	-750	-585	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,428	1,847	1,427	2,428	1,847	1,427	2,428	1,847	1,427	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,194	-1,368	-1,458	-1,641	-1,781	-1,840	-2,179	-2,278	-2,299	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,864	-1,588	-1,361	-2,166	-1,840	-1,573	-2,527	-2,141	-1,825	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-294	-184	-121	-294	-184	-121	-294	-184	-121	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	695	425	275	695	425	275	695	425	275	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,462	-1,346	-1,207	-1,764	-1,598	-1,419	-2,126	-1,899	-1,761	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,871	-2,470	-2,174	-2,884	-2,537	-3,381
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-297	-756	-297	-756	-297	-756
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	703	1,861	703	1,861	703	1,861
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	528	1,506	528	1,506	528	1,506
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-936	141	-1,240	273	-1,602	-770

Far West Sub-Corridor (Albury) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,817	-2,625	-2,450	-3,293	-3,065	-2,857	-3,865	-3,594	-3,346	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-950	-729	-569	-950	-729	-569	-950	-729	-569	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,381	1,811	1,400	2,381	1,811	1,400	2,381	1,811	1,400	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,386	-1,543	-1,619	-1,862	-1,983	-2,026	-2,434	-2,512	-2,515	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,985	-1,691	-1,449	-2,306	-1,959	-1,675	-2,691	-2,280	-1,943	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-285	-178	-118	-285	-178	-118	-285	-178	-118	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	681	417	269	681	417	269	681	417	269	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,589	-1453	-1,298	-1,911	-1,721	-1,523	-2,295	-2,042	-1,792	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,992	-2,630	-2,315	-3,071	-2,702	-3,601
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-289	-734	-289	-734	-289	-734
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	689	1,825	689	1,825	689	1,825
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	507	1,445	507	1,445	507	1,445
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,085	-95	-1,408	-536	-1,794	-1,066

Central Inland Sub-Corridor (Shepparton) - $1.5 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,356	-1,293	-1,234	-1,492	-1,423	-1,358	-1,645	-1,568	-1,496	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,128	-889	-712	-1,128	-889	-712	-1,128	-889	-712	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,040	1,581	1,247	2,040	1,581	1,247	2,040	1,581	1,247	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-444	-600	-699	-580	-730	-823	-733	-875	-961	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,068	-956	-857	-1,175	-1,051	-943	-1,294	-1,157	-1,037	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-393	-267	-191	-393	-267	-191	-393	-267	-191	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	654	428	298	654	428	298	654	428	298	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-807	-794	-751	-914	-889	-836	-1,033	-995	-930	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,071	-1,294	-1,178	-1,425	-1,297	-1,570
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-397	-894	-397	-894	-397	-894
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	661	1,592	661	1,592	661	1,592
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	620	1,658	620	1,658	620	1,658
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-187	1,061	-294	931	-413	786

Central Inland Sub-Corridor (Shepparton) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,680	-2,520	-2,373	-3,058	-2,874	-2,704	-3,499	-3,287	-3,090	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-982	-761	-600	-982	-761	-600	-982	-761	-600	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,947	1,492	1,162	1,947	1,492	1,162	1,947	1,492	1,162	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,714	-1,790	-1,811	-2,093	-2,144	-2,142	-2,534	-2,556	-2,528	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,973	-1,713	-1,494	-2,244	-1,945	-1,694	-2,559	-2,215	-1,925	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-312	-201	-137	-312	-201	-137	-312	-201	-137	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	582	365	242	582	365	242	582	365	242	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,703	-1,549	-1,388	-1,974	-1,781	-1,588	-2,289	-2,051	-1,820	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,980	-2,525	-2,252	-2,879	-2,568	-3,293
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-315	-766	-315	-766	-315	-766
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	589	1,503	589	1,503	589	1,503
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	582	1,619	582	1,619	582	1,619
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,124	-169	-1,396	-524	-1,713	-937

Central Inland Sub-Corridor (Shepparton) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-7,007	-6,282	-5,649	-8,655	-7,738	-6,940	-10,754	-9,589	-8,577	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-704	-521	-391	-704	-521	-391	-704	-521	-391	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,592	1,176	880	1,592	1,176	880	1,592	1,176	880	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-6,119	-5,627	-5,160	-7,768	-7,084	-6,451	-9,866	-8,935	-8,088	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-4,127	-3,277	-2,643	-5,026	-3,964	-3,176	-6,160	-4,825	-3,841	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-171	-95	-56	-171	-95	-56	-171	-95	-56	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	383	212	124	383	212	124	383	212	124	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-3,916	-3,161	-2,575	-4,815	-3,847	-3,108	-5,948	-4,709	-3,773	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-4,150	-6,300	-5,055	-7,762	-6,196	-9,619
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-174	-525	-174	-525	-174	-525
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	388	1,185	388	1,185	388	1,185
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	429	1,374	429	1,374	429	1,374
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,507	-4,267	-4,412	-5,728	-5,553	-7,586

Central Inland Sub-Corridor (Albury) - $1.5 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,345	-1,271	-1,202	-1,517	-1,433	-1,354	-1,714	-1,618	-1,529	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,044	-814	-646	-1,044	-814	-646	-1,044	-814	-646	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	2,042	1,572	1,231	2,042	1,572	1,231	2,042	1,572	1,231	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-348	-513	-617	-519	-675	-770	-716	-861	-944	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,013	-888	-782	-1,140	-998	-877	-1,285	-1,124	-987	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-344	-226	-157	-344	-226	-157	-344	-226	-157	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	629	401	272	629	401	272	629	401	272	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-728	-713	-667	-855	-823	-763	-1,000	-949	-872	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,016	-1,273	-1,143	-1,435	-1,289	-1,621
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-347	-820	-347	-820	-347	-820
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	636	1,583	636	1,583	636	1,583
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	597	1,630	597	1,630	597	1,630
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-131	1,120	-258	959	-404	773

Central Inland Sub-Corridor (Albury) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,681	-2,521	-2,374	-3,059	-2,876	-2,705	-3,501	-3,288	-3,092	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-990	-767	-605	-990	-767	-605	-990	-767	-605	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,996	1,530	1,191	1,996	1,530	1,191	1,996	1,530	1,191	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,674	-1,759	-1,787	-2,053	-2,113	-2,118	-2,494	-2,526	-2,505	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,974	-1,713	-1,494	-2,245	-1,946	-1,694	-2,560	-2,216	-1,926	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-314	-202	-138	-314	-202	-138	-314	-202	-138	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	597	374	249	597	374	249	597	374	249	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,691	-1,541	-1,383	-1,962	-1,774	-1,583	-2,278	-2,044	-1,815	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,980	-2,526	-2,253	-2,880	-2,569	-3,294
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-318	-773	-318	-773	-318	-773
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	604	1,541	604	1,541	604	1,541
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	577	1,604	577	1,604	577	1,604
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,117	-153	-1,389	-508	-1,706	-921

Central Inland Sub-Corridor (Albury) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-6,632	-5,970	-5,390	-8,168	-7,333	-6,603	-10,120	-9,063	-8,139	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-729	-541	-407	-729	-541	-407	-729	-541	-407	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,643	1,216	912	1,643	1,216	912	1,643	1,216	912	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-5,717	-5,295	-4,885	-7,253	-6,658	-6,098	-9,205	-8,387	-7,634	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-3,979	-3,181	-2,579	-4,834	-3,839	-3,093	-5,910	-4,663	-3,734	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-180	-101	-59	-180	-101	-59	-180	-101	-59	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	399	222	130	399	222	130	399	222	130	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-3,759	-3,059	-2,508	-4,614	-3,718	-3,023	-5,691	-4,542	-3,663	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-4,000	-5,987	-4,861	-7,355	-5,943	-9,090
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-182	-545	-182	-545	-182	-545
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	405	1,226	405	1,226	405	1,226
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	428	1,361	428	1,361	428	1,361
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,350	-3,946	-4,210	-5,314	-5,293	-7,048

Coastal Sub-Corridor (Shepparton) - $1.5 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,347	-1,273	-1,204	-1,519	-1,435	-1,356	-1,716	-1,620	-1,531	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,033	-812	-651	-1,033	-812	-651	-1,033	-812	-651	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,648	1,277	1,006	1,648	1,277	1,006	1,648	1,277	1,006	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-731	-809	-848	-903	-970	-1,000	-1,101	-1,156	-1,175	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,014	-889	-782	-1,141	-999	-878	-1,286	-1,125	-988	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-357	-241	-172	-357	-241	-172	-357	-241	-172	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	527	344	239	527	344	239	527	344	239	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-845	-786	-716	-971	-896	-812	-1,117	-1,022	-922	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,017	-1,275	-1,145	-1,437	-1,290	-1,623
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-361	-818	-361	-818	-361	-818
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	532	1,285	532	1,285	532	1,285
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	693	1,859	693	1,859	693	1,859
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-153	1,052	-280	890	-426	704

Coastal Sub-Corridor (Shepparton) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,680	-2,521	-2,373	-3,059	-2,875	-2,705	-3,500	-3,288	-3,091	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-992	-778	-621	-992	-778	-621	-992	-778	-621	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,676	1,296	1,019	1,676	1,296	1,019	1,676	1,296	1,019	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,996	-2,004	-1,976	-2,375	-2,358	-2,308	-2,816	-2,771	-2,694	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,974	-1,713	-1,494	-2,245	-1,946	-1,694	-2,560	-2,215	-1,926	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-338	-226	-160	-338	-226	-160	-338	-226	-160	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	529	343	236	529	343	236	529	343	236	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,783	-1,597	-1,418	-2,054	-1,829	-1,618	-2,369	-2,099	-1,850	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,980	-2,525	-2,252	-2,880	-2,569	-3,294
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-341	-783	-341	-783	-341	-783
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	534	1,304	534	1,304	534	1,304
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	677	1,831	677	1,831	677	1,831
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,109	-174	-1,382	-529	-1,698	-942

Coastal Sub-Corridor (Shepparton) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-8,472	-7,445	-6,573	-10,575	-9,264	-8,153	-13,272	-11,592	-10,171	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-647	-489	-375	-647	-489	-375	-647	-489	-375	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,452	1,095	838	1,452	1,095	838	1,452	1,095	838	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-7,668	-6,839	-6,110	-9,771	-8,658	-7,690	-12,468	-10,987	-9,708	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-4,574	-3,525	-2,777	-5,616	-4,294	-3,357	-6,939	-5,265	-4,085	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-180	-110	-71	-180	-110	-71	-180	-110	-71	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	399	242	157	399	242	157	399	242	157	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-4,354	-3,392	-2,692	-5,397	-4,161	-3,272	-6,720	-5,132	-3,999	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-4,603	-7,471	-5,653	-9,297	-6,985	-11,635
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-182	-492	-182	-492	-182	-492
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	404	1,103	404	1,103	404	1,103
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	510	1,508	510	1,508	510	1,508
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,870	-5,352	-4,920	-7,178	-6,253	-9,516

Coastal Sub-Corridor (Albury) - $1.5 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,347	-1,273	-1,204	-1,519	-1,435	-1,356	-1,717	-1,621	-1,531	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,122	-881	-705	-1,122	-881	-705	-1,122	-881	-705	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,867	1,445	1,137	1,867	1,445	1,137	1,867	1,445	1,137	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-602	-710	-771	-774	-872	-924	-972	-1,058	-1,099	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,015	-889	-783	-1,141	-1,000	-879	-1,287	-1,126	-988	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-385	-260	-185	-385	-260	-185	-385	-260	-185	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	593	387	268	593	387	268	593	387	268	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-807	-763	-700	-934	-873	-796	-1,079	-999	-906	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,018	-1,275	-1,145	-1,437	-1,291	-1,623
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-389	-887	-389	-887	-389	-887
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	600	1,454	600	1,454	600	1,454
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	683	1,832	683	1,832	683	1,832
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-124	1,125	-251	962	-397	776

Coastal Sub-Corridor (Albury) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,675	-2,516	-2,369	-3,053	-2,870	-2,700	-3,494	-3,282	-3,085	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,079	-845	-673	-1,079	-845	-673	-1,079	-845	-673	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,920	1,482	1,164	1,920	1,482	1,164	1,920	1,482	1,164	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,834	-1,879	-1,878	-2,212	-2,233	-2,210	-2,653	-2,645	-2,595	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,970	-1,710	-1,491	-2,241	-1,942	-1,691	-2,555	-2,211	-1,922	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-365	-244	-172	-365	-244	-172	-365	-244	-172	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	602	389	267	602	389	267	602	389	267	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,733	-1,565	-1,396	-2,003	-1,797	-1,596	-2,318	-2,066	-1,827	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,976	-2,521	-2,248	-2,875	-2,564	-3,288
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-368	-850	-368	-850	-368	-850
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	608	1,492	608	1,492	608	1,492
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	666	1,798	666	1,798	666	1,798
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,071	-81	-1,342	-435	-1,658	-848

Coastal Sub-Corridor (Albury) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-8,143	-7,183	-6,365	-10,147	-8,924	-7,883	-12,714	-11,150	-9,820	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-742	-562	-432	-742	-562	-432	-742	-562	-432	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,747	1,318	1,011	1,747	1,318	1,011	1,747	1,318	1,011	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-7,138	-6,427	-5,786	-9,142	-8,167	-7,304	-11,710	-10,393	-9,241	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-4,470	-3,464	-2,741	-5,482	-4,215	-3,310	-6,765	-5,162	-4,024	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-208	-128	-83	-208	-128	-83	-208	-128	-83	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	482	293	190	482	293	190	482	293	190	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-4,196	-3,299	-2,634	-5,208	-4,050	-3,204	-6,491	-4,997	-3,917	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-4,498	-7,208	-5,517	-8,955	-6,809	-11,189
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-211	-566	-211	-566	-211	-566
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	488	1,328	488	1,328	488	1,328
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	510	1,498	510	1,498	510	1,498
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,710	-4,948	-4,729	-6,695	-6,021	-8,929

Hybrid Sub-Corridor (Shepparton) - $1.5 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-1,345	-1,271	-1,202	-1,517	-1,433	-1,354	-1,714	-1,618	-1,529	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,088	-850	-674	-1,088	-850	-674	-1,088	-850	-674	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,702	1,310	1,025	1,702	1,310	1,025	1,702	1,310	1,025	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-732	-811	-852	-904	-973	-1,004	-1,101	-1,158	-1,178	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,013	-888	-781	-1,140	-998	-877	-1,285	-1,124	-987	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-359	-237	-165	-359	-237	-165	-359	-237	-165	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	523	333	225	523	333	225	523	333	225	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-850	-791	-721	-976	-901	-816	-1,122	-1,027	-926	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,016	-1,273	-1,143	-1,435	-1,289	-1,621
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-363	-855	-363	-855	-363	-855
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	528	1,319	528	1,319	528	1,319
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	665	1,820	665	1,820	665	1,820
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-186	1,011	-313	849	-459	663

Hybrid Sub-Corridor (Shepparton) - $3 Billion

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-2,676	-2,517	-2,369	-3,054	-2,870	-2,700	-3,494	-3,282	-3,086	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,004	-778	-614	-1,004	-778	-614	-1,004	-778	-614	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,660	1,272	990	1,660	1,272	990	1,660	1,272	990	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-2,019	-2,023	-1,993	-2,397	-2,377	-2,324	-2,838	-2,789	-2,709	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,970	-1,710	-1,491	-2,241	-1,942	-1,691	-2,556	-2,212	-1,923	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-319	-206	-140	-319	-206	-140	-319	-206	-140	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	495	311	206	495	311	206	495	311	206	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,794	-1,605	-1,425	-2,065	-1,838	-1,625	-2,379	-2,107	-1,857	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,977	-2,521	-2,248	-2,875	-2,564	-3,288
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-323	-784	-323	-784	-323	-784
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	501	1,281	501	1,281	501	1,281
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	644	1,792	644	1,792	644	1,792
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,154	-232	-1,426	-586	-1,742	-999

Hybrid Sub-Corridor (Shepparton) - Unconstrained

Infrastructure Costs	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10	Case 11	Case 12	Case 13	Case 14	Case 15
Government															
Construction	-5,767	-5,236	-4,764	-7,053	-6,387	-5,798	-8,676	-7,839	-7,099	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-757	-566	-430	-757	-566	-430	-757	-566	-430	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,430	1,066	805	1,430	1,066	805	1,430	1,066	805	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-5,093	-4,736	-4,389	-6,379	-5,887	-5,422	-8,003	-7,339	-6,723	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-3,594	-2,914	-2,391	-4,341	-3,499	-2,855	-5,275	-4,227	-3,429	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-196	-113	-68	-196	-113	-68	-196	-113	-68	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	362	206	124	362	206	124	362	206	124	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-3,428	-2,821	-2,336	-4,175	-3,406	-2,799	-5,109	-4,134	-3,374	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,612	-5,249	-4,363	-6,404	-5,303	-7,860
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-199	-571	-199	-571	-199	-571
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	367	1,074	367	1,074	367	1,074
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	513	1,589	513	1,589	513	1,589
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2,931	-3,157	-3,682	-4,312	-4,622	-5,768

Hybrid Sub-Corridor (Albury) - $1.5 Billion															
Infrastructure Costs	**Case 1**	**Case 2**	**Case 3**	**Case 4**	**Case 5**	**Case 6**	**Case 7**	**Case 8**	**Case 9**	**Case 10**	**Case 11**	**Case 12**	**Case 13**	**Case 14**	**Case 15**
Government															
Construction	-1,339	-1,265	-1,196	-1,510	-1,426	-1,348	-1,706	-1,611	-1,522	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,080	-843	-669	-1,080	-843	-669	-1,080	-843	-669	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,845	1,420	1,110	1,845	1,420	1,110	1,845	1,420	1,110	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-574	-689	-755	-745	-850	-907	-941	-1,034	-1,080	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,008	-884	-778	-1,134	-993	-873	-1,279	-1,119	-982	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-356	-234	-163	-356	-234	-163	-356	-234	-163	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	565	360	243	565	360	243	565	360	243	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-799	-758	-697	-925	-867	-793	-1,070	-993	-902	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,011	-1,267	-1,138	-1,428	-1,283	-1,613
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-360	-849	-360	-849	-360	-849
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	572	1,430	572	1,430	572	1,430
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	666	1,818	666	1,818	666	1,818
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-134	1,132	-260	971	-405	786

Hybrid Sub-Corridor (Albury) - $3 Billion															
Infrastructure Costs	**Case 1**	**Case 2**	**Case 3**	**Case 4**	**Case 5**	**Case 6**	**Case 7**	**Case 8**	**Case 9**	**Case 10**	**Case 11**	**Case 12**	**Case 13**	**Case 14**	**Case 15**
Government															
Construction	-2,683	-2,523	-2,375	-3,062	-2,878	-2,707	-3,503	-3,291	-3,094	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-1,008	-781	-616	-1,008	-781	-616	-1,008	-781	-616	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,794	1,374	1,069	1,794	1,374	1,069	1,794	1,374	1,069	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-1,896	-1,931	-1,922	-2,275	-2,285	-2,254	-2,717	-2,698	-2,641	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-1,975	-1,715	-1,495	-2,247	-1,947	-1,696	-2,562	-2,217	-1,928	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-320	-206	-140	-320	-206	-140	-320	-206	-140	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	534	334	222	534	334	222	534	334	222	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-1,761	-1,587	-1,414	-2,033	-1,819	-1,614	-2,348	-2,089	-1,846	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,982	-2,527	-2,254	-2,883	-2,571	-3,296
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-324	-787	-324	-787	-324	-787
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	540	1,384	540	1,384	540	1,384
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	640	1,778	640	1,778	640	1,778
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,125	-153	-1,398	-508	-1,715	-922

Hybrid Sub-Corridor (Albury) - Unconstrained															
Infrastructure Costs	**Case 1**	**Case 2**	**Case 3**	**Case 4**	**Case 5**	**Case 6**	**Case 7**	**Case 8**	**Case 9**	**Case 10**	**Case 11**	**Case 12**	**Case 13**	**Case 14**	**Case 15**
Government															
Construction	-5,401	-4,924	-4,499	-6,576	-5,981	-5,452	-8,054	-7,309	-6,647	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-798	-600	-459	-798	-600	-459	-798	-600	-459	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	1,587	1,188	902	1,587	1,188	902	1,587	1,188	902	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Govt Cost	-4,611	-4,336	-4,055	-5,786	-5,393	-5,008	-7,264	-6,721	-6,204	N/A	N/A	N/A	N/A	N/A	N/A
Private															
Construction	-3,432	-2,804	-2,316	-4,130	-3,355	-2,756	-5,000	-4,040	-3,300	N/A	N/A	N/A	N/A	N/A	N/A
Operating Cost	-214	-126	-78	-214	-126	-78	-214	-126	-78	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Revenue	413	239	146	413	239	146	413	239	146	N/A	N/A	N/A	N/A	N/A	N/A
Externalities	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Total Private Cost	-3,233	-2,690	-2,247	-3,931	-3,242	-2,688	-4,801	-3,926	-3,232	N/A	N/A	N/A	N/A	N/A	N/A
Economic Cost/Benefit															
Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,449	-4,937	-4,150	-5,997	-5,025	-7,328
Operating Cost	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-216	-605	-216	-605	-216	-605
Fixed Revenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	418	1,198	418	1,198	418	1,198
Externalities	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	529	1,606	529	1,606	529	1,606
Total Econ Cost/Benefit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-2,718	-2,738	-3,419	-3,798	-4,294	-5,130

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