North East Link
Net Community Benefit

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Expert Evidence Presentation
Overview

- An assessment of net community benefit of the NEL is estimated via a Benefit Cost Ratio (BCR). The BCR is estimated to be 1.25. That is, for each $1 of cost there is $1.25 of benefits. The NEL BCR uses (in most part) the standard approach for assessing road projects.

- In recent history, other road projects were assessed using these same standards and produced a positive BCR. However, upon their opening, it was found that many of the benefits which had supported the positive BCR were merely theoretical and did not really exist.

- Looking at these failed tolls roads and other factors relevant to the NEL, raises concerns with the net community benefit of the project.
Cost Benefit Analysis – Problems

Costs

- Transport projects exceed their stated budget by an average of 26 per cent.
- Not all costs have been included (loss of open space, business disruption).
- EastLink Tunnels – identified as no longer being an issue.

Benefits

- Travel times overstated due to very small travel times which are not likely to be observed.
- Number and value of business trips look overstated for the area.
- Airport Rail Link and Suburban Rail Loop not accounted for.
- AM peak to annual expansion factor looks to be optimistic.
Understated construction costs

The project P50 cost is $15.5 billion. The P90 value is $16.5 billion a 7% ‘margin for error’.

A review of previous projects found that P90 were 9.2% higher than the P50.

The actual outcome was costs 26% higher than the P50 expected.

Using a 26% budget overrun would see the cost of the North East Link exceed the benefits (BCR of 0.99).

Source: Grattan Institute: Cost Overruns in Transport Projects
Understated construction costs

Very strangely, the risk adjusted costs are no different from the Base scenario. Hence the risk adjusted analysis suggests that there is no risk of costs blowing out on the NEL, while there is a risk that benefits would be higher than expected.

| TABLE 5: EVALUATION OF STRATEGIC OPTIONS SUMMARY OF COST BENEFIT ANALYSIS |
|---------------------------------------|-----------------|-----------------|
|                                       | Base scenario   | Risk-adjusted   |
| Capital costs ($PV)                   | $8,191m         | $8,191m         |
| Operating and maintenance costs ($PV) | $462m           | $462m           |
| Total project costs ($PV)             | $8,653m         | $8,653m         |
| Transport benefits ($PV)              | $10,840m        | $12,054m        |
| Net present value (NPV) - Transport only | $2,187m     | $3,401m         |
| Benefit Cost Ratio (BCR) - Transport only | 1.3            | 1.4             |

Source: NEL Business Case Appendix Q1 Economic Appraisal (Page 66)
Forgotten cost

- The permanent loss of around 30 hectares currently used for open space activities and loss of other space during the construction period.

- No estimate the cost of business disruption caused by the NEL.
  - Acquisition of land which impacts on business operations;
  - Disruption of business activity (e.g. reduced access for customers and reduced amenity impacting on passing trade) during the construction phase; and
  - Disruption of business activity (e.g. reduced access for customers and reduced amenity impacting on passing trade) during the operational phase.

- While these costs would not be in the $100s of millions of dollars, they should have been included.
Travel time saving benefits are unreliable

- In a review of the Lane Cove Tunnel and Cross City Tunnel failures, the NSW Roads and Maritime Services describes that:

  “the majority of travel time savings were less than five minutes (which are often not realised and can be considered inframarginal in economic terms)”.

- Inframarginal means that they are within the margin of error of the modelling or/and cannot be observed by road users.

- In the case of the Lane Cove Tunnel, when travel time savings of less than five minutes were removed from the analysis, the BCR decreased by ~50%.
Travel time saving benefits are unreliable

Analysis of the WestConnex Project in Sydney saw that removing travel time savings of less than five minutes, reduced travel benefits by 55%.

This reduced the BCR of WestConnex from 1.64 to 1.12.

FIGURE 14. AVERAGE TRAVEL TIME SAVINGS BY NUMBER OF TRIPS WITH WESTCONNEX (2026)
Travel time saving benefits are unreliable

There are 28 combinations of travel times. Only 7 of these travel times have travel time savings of greater than 5 minutes.

It would be unlikely that local trips would have savings of greater than 5 minutes.

The removal of travel time savings of less than 5 minutes would reduce the BCR from 1.25 to around 0.6.
Travel time saving benefits are unreliable

This is also confirmed by a significant amount of household travel savings benefits accruing to areas between M80 and Eastern Freeway.

These are locations which would not benefit from links with the highest travel time savings.

Source: NEL Business Case Page 8-29
Travel time saving benefits are unreliable

Also these travel time savings for locations well away from the project corridor.

The removal of small travel time savings from the transport modelling would reduce the BCR from 1.25 to around 0.6.
Business trip benefits appear overstated

NEL aims to reduce travel costs between employment clusters (e.g. La Trobe, Box Hill and Ringwood).

But business trip benefits accrue to mostly residential suburbs.

Applying Victorian averages to the NEL Corridor might to part of the problem.
Business trip benefits appears overstated

Business case values a business trip of $52.61 per hour. This is based on Victorian average weekly earnings.

The study area looks to have average weekly earnings of around 11.4% less than the state average.

Business case uses 18% of all vehicle kilometres trips are business trips. This is based on the Victorian average.

Data from the Victorian Integrated Survey of Travel & Activity suggest a figure for the study area would be 14%.

Using study area values of business travel reduces the BCR from 1.25 to 1.16.
Impact of Airport Rail Link and Suburban Rail Loop

- There is no sensitivity analysis on the impact of the Airport Rail Link and Suburban Rail Loop. Two sensitives in the Business Case provide some clues:
  - A boost in public transport network would reduce benefits by 17 per cent. This reduced the BCR to 1.04.
  - A pessimistic case presents a scenario where benefits realised by the project are lower than expected. This produces a BCR of 0.5
- The midpoint BCR between the constrained public transport network and the pessimistic case is a BCR of 0.77.
- This could provide an insight into the impact of the Suburban Rail Loop and Airport Rail Link.
Impact of Airport Rail Link and Suburban Rail Loop

- The Veitch Expert Evidence touches on this topic. A sensitivity test for the Suburban Rail Loop (in 2051) reduced demand for the NEL by ~ 1%.

- This seems low, as a sensitivity test for the Melbourne Metro 2 + Doncaster Rail reduced demand for the NEL by ~ 1 per cent. A 1% reduction makes sense, as only a small percentage of NEL users are destined for the inner city.

- However, the impact of the SRL, which is more of a viable alternative to the NEL, being the same as the MM2 + DR, is difficult to reconcile.

- A constrained PT network impacts the NEL by 17%, but the SRL (a major increase in the public transport network capacity) only has a 1% impact. These differing results are difficult to reconcile.
Submissions on Behalf of North East Link Project: Part A

• Infrastructure Victoria deemed the NEL to be the highest priority infrastructure project. This was conclusion was based on the IV assessing the project as having a BCR of between 1.4 and 2.1. IV felt that even a high cost, low benefit scenario, the NEL BCR would still be 1.4.

• The Business Case produced a 1.13 BCR comparable (the stated 1.25 BCR included benefits which IV assessment didn’t) to the IV assessment.

• Had the preliminary BCR been this low, I would question if IV would still have deemed the NEL to be the highest priority infrastructure project.

• Rather the Melbourne Airport Rail Link or Outer Metropolitan Ring Road would have been ranked number one priority.
The Infrastructure Australia assessment which resulted in the NEL being placed on the Infrastructure Priority List but “identified limitations in the proponent’s cost-benefit analysis which are likely to overstate the reported BCR”.

The first limitation relates to higher vehicle operating cost (VOC) savings for road users by allowing higher travel speeds than outlined in the Infrastructure Australia Assessment Framework.

The Business Case included a sensitivity analysis to using the Infrastructure Australia Assessment Framework VOC, this reduced the BCR to 1.1.
The second limitation relates to the inclusion of the avoided perceived congestion in the BCR, which is inconsistent with Victorian Government guidelines for transport appraisals. Removal of this benefit would reduce the BCR to 1.13.

Infrastructure Australia recommends excluding this type of benefit from the core results as the evidence base is not yet sufficiently mature to allow their quantification with confidence.

Overall, Infrastructure Australia considered that the North East Link is likely to deliver economic benefits that marginally exceeds its costs.
Conclusion

- Road projects like the NEL were assessed using standards that produced a positive BCR.
- However, upon their opening, it was found that many of the benefits which had supported the positive BCR were merely theoretical and did not really exist.
- When considering the number of benefits that are likely to be overestimated and costs that may have been underestimated, it is very possible that there is no net community benefit from the NEL.
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THANK YOU

Questions?