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Investment should benefit the community

We can do better with the money we spend on transport projects if we evaluate proposals more critically, **Marion Terrill** writes.

Canberra Metro Consortium chairman Mark Lynch and Capital Metro Minister Simon Corbell with a model of a CAF light rail vehicle. Photo: Jeffery Chan

A good starting point for governments looking for ways to manage congestion and rush-hour gridlock in our major cities would be to choose those transport projects that will do most to fix the problem at the least cost. It sounds fairly simple. But as the Grattan Institute's new report, *Roads to Riches*, shows, too often politics trumps the public interest when it comes to investing in transport infrastructure.

Australian governments have spent unprecedented sums on transport infrastructure in the past decade, exceeding 1 per cent of GDP since 2009. But, mostly, they have not spent wisely.

For one thing, investment has not put cities first, although they are the engines of national economic growth. Our largest cities are experiencing increasing congestion, yet government spending on new transport infrastructure has largely bypassed them. Just 43 per cent of new government investment in road and rail infrastructure has been spent in our four largest cities, even though these cities account for two-thirds of population growth and 60 per cent of national gross domestic product.

One difficulty is that there is little to stop politicians committing to projects before they are properly evaluated, particularly during election campaigns. Another problem is that good transport planning often falls by the wayside when negotiating the political deals required in forming minority government.

The ACT government's controversial new light-rail project, priced at $698 million, is a case in point. A central plank of the Greens' pitch at the 2012 election, light rail became a key element of the parliamentary agreement that returned the Labor government with the support of Greens.

Light-rail users will no doubt value the new service – why wouldn't they? – but everything comes at a cost. And the real cost here is the better choice forgone. According to the ACT government's failed submission to Infrastructure Australia in 2012, the alternative option, bus rapid transit, would have delivered similar benefits to light rail, but at less than half the cost. Cost-benefit analysis showed that bus rapid transit would yield $1.98 of benefits for every dollar invested, whereas light rail would produce just $1.02.

In a business case published in late 2014, the benefit-cost estimate for Canberra light rail was bumped up to 1.2, but voters should still be sceptical. The project only breaks even because land-use benefits and wider economic impacts from light rail account for almost three-fifths of the projected benefits.

Yet, such benefits are highly speculative. "Wider economic impacts" are difficult to estimate separately from the direct impacts of new initiatives; adding them to the benefits included in conventional benefit-cost analysis risks counting them twice. A more conventional calculation that excludes these potential impacts, such as the one Infrastructure Australia requires for funding proposals, sees the benefit-cost ratio fall to less than 0.5. That is, every dollar spent would return less than 50 cents in benefit to the community.

Canberra light rail is just one example of an approach to investment in transport infrastructure that simply does not meet the needs of the community. Too often, taxpayers' money is spent on projects that are not especially important to the economy, but are popular with local voters.

Governments should not be able to commit public money to a transport infrastructure project before tabling in Parliament a rigorous like-for-like evaluation of its benefits and costs conducted by a genuinely independent body. Governments could then make their decisions – and defend them – on the basis of a clear and public rationale for investment.

Once governments are only building projects where the community benefit clearly outweighs the cost, they should build all such projects. Quality assessment, not arbitrarily imposed budgetary limits, should determine the level of investment. In other words, if a project would deliver net benefits to the community, the government should build it.

More disciplined selection of transport infrastructure projects would mean less wasteful spending and better transport networks, built where and when they will make the most difference. Now that would be a project worth voting for.

Marion Terrill is transport program director at the Grattan Institute, an independent public policy think tank.

Cars are only as green as the power charging them

Tim Dick

Tesla's new electric car is the industry's iPod moment, the start of a revolution that will kill the combustion engine and take the oil industry with it. It's an answer to global warming.

Apparently.

Given that the first of Tesla's Model 3 cars is not due out until next year, or not until 2018 in Australia, that is some seriously premature hype.

By early on Sunday, Tesla chief executive Elon Musk said it had 253,000 orders for its Model 3, each of which required a deposit of US$1000, £1000 or A$1500.

If even half those people end up buying the car, it represents a US$8.8 billion launch of a car. If all of them stump up, it's a US$17.7 billion one.

The hype is backed by money the likes of which have never been seen for an electric car. It must spook the competition, which for Tesla comes from General Motors, Nissan, Volkswagen, BMW, and Ford, all of which are speeding up their electric car efforts.

For now, Tesla has the required cachet to spur people like Sydneysider Andreas Stephens, the first person in Australia to put down $1500 for a car he won't see for at least two years.

Tesla said the car would cost US$35,000, carry five adults and have a range of 345 kilometres per charge. Fans like Stephens responded with serious cash, and its share price spiked 5 per cent.

Whatever transpires with the Model 3, the amount taken in deposits surely justifies the hope that the arrival of mass-market electric cars marks the point that private transport comes to the climate-protection party in significant numbers.

It demonstrates there are many people willing to pay to do what their governments seem incapable of, taking meaningful action to reduce damaging climate change.

Cars are important in that fight: about 17 per cent of Australia's greenhouse gas emissions come from transport, with three-fifths of that from light vehicles.

But electric cars are no solution unless Australia, along with the rest of the world, changes the way the electricity they need to run is generated. Unless Tesla drivers charge their cars with power from solar panels or from an electricity account solely supplied with renewable energy, they won't be doing much to reduce damaging global warming.

We don't know how much power will be needed to charge a Model 3 when it finally arrives, but last year Matthew Bailes, pro-vice chancellor of research at Swinburne University of Technology, did the numbers on the existing Tesla Model S.

He estimated that that $130,000 car requires about 100 kilowatt hours of electricity, which in Victoria comes mainly from brown coal, meaning about 100 kilograms of carbon dioxide is emitted per charge. That works out at about 28 kilograms of carbon emitted per 100 km driven – far higher than the 13 kilograms of carbon emitted by his hybrid Prius running the same distance. Bailes concluded he would be doing more environmental damage by switching to the existing Tesla than by sticking to his hybrid.

The crucial role for government is not in minor moves like allowing electric cars into transit lanes, it is in changing the way power is generated.

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