

CLIMATE CHANGE AND THE NORTH EAST LINK PROJECT

Where we are now

Whatever occurs from now on, the average global temperature had increased by about 1.2 degrees Celsius above pre-industrial long-term average levels. And momentum is growing for greater increases.

This is making Melbourne and Victoria a different place to what we had grown accustomed to during much of our lives, as experience of fire storms, increased frequency flooding and other climate-related events accelerate.

The task now confronting governments, institutions and individuals is to ensure that further increases in temperature are reigned in. But without substantial cuts in emissions, we face an increase of 2.7 degrees increase in temperature – which never mind any accompanying physical unpleasantness – would put human society in peril.

We are staring at a series of tipping points, of runaway change, due to release of methane from melting tundra, carbon dioxide release from burning forests (offset to some extent from cooling due to smoke), polar ice-sheet melt, ocean current shifts, large sea level rises and so on. Apart from the effect on humans, with large population shifts due to inundation and severe weather events, the term ecocide has been coined to cover the effects on the global ecosystem of the blocking of climate action and actions which exacerbate the emergency by contributing to global heating.

A major evil of climate change is that for there to be effective action to ensure that our environment does not become unlivable for humans, multitudinous actors need to all pull in the same direction, more or less; something that humans are not very good at most of the time. There is no global government to do the job for us. As we have observed, there is ample scope for “free loading” governments, institutions and individuals to assert that any effort they may make separately really makes no difference, when in fact the collective impact of such declarations of indifference will be catastrophic.

To make the appropriate commitment to reigning in climate change, Australia as a whole must cut current emissions by 75% by the end of the current decade.

North East Link and the decline in sustainable transport

So, where does the Victorian government’s North East Link fit into all that? Overall, it is the most recent chapter of a story in which motor vehicle travel has increased rapidly and public and active transport has been marginalized in Victoria over many decades. And the Victorian government’s default response during the period has been to build more roads. The result is that transport is now the fastest growing source of greenhouse emissions in the state.

The \$16 billion project would provide for substantial increases in roads capacity in the north-east of Melbourne, primarily for private passenger vehicles and for freight-carrying trucks. And this is an area of metropolitan Melbourne very poorly served by public and active transport services and infrastructure.

Electric vehicles as climate change solution?

A central question might be: what type of vehicles are to occupy this massive increase in road space, which the Victorian government wants to have open for traffic within the decade, the period in which we must cut emissions by 75%? It may be thought that the roll-out of electric motor vehicles to substitute for conventionally powered vehicles would, from a climate change perspective, hold out great promise. The one matter of concern, though, is that the roll-out would not be sufficiently rapid to meet immediate climate change requirements.

And this would be the case. The rapid (and substantial) reduction in emissions required within the next decade will not be accomplished by a large-scale roll-out of electric vehicles. They are expensive for most people, which will be a major inhibition, and too great a proportion of the electricity provided to run them during this decade would continue to be generated from fossil fuels.

The prospect of converting the highly polluting heavy vehicle fleet in Victoria is even more difficult. It has an average age of 15 years. And it has been observed that there are few regulatory, policy or market forces to provide impetus for fleet renewal of older trucks. (*Options for managing the Impacts of Aged Heavy Vehicles*, Austroads April 2021) And there is no material effort being made by the Victorian government to relocate heavy freight onto more energy-efficient heavy rail.

In the longer term?

What about the climate beyond this decade? Will electric vehicles have a part to play? Yes, it could be expected that a large proportion of all travel will continue to be by private motor car. And with electric vehicles by then being charged only from renewable sources, a continuing climate risk would be resolved.

But the private electric motor car would increase reliance on personal and private transport as opposed to promoting multimodal transport options like buses, trains and trams. Electrifying the bus system, together with the train and tram networks, is an essential way out for the transport sector. Trams and buses do use road space, but way less than the private motor car for the number of people they carry. They use far fewer resources all round.

However, electric vehicles are no different to conventionally powered vehicles in their appetite for urban space, both road space and for parking. And there is also the demand for space on private property, for off-street parking and so on. This is space required more and more to offset the effects of climate change. Space that should be repurposed, for instance, as treed parkland and in residential precincts to assist in bringing the Urban Heat Island effect under effective control.

The development of autonomous motor vehicles, now in full swing and which will be electric powered, is an important future consideration. Whilst potentially more space efficient than the current generation of passenger vehicles, how space-efficient they may be ultimately is largely dependent on regulatory regimes to apply to their operation. It is certain, though, they would be far less space-efficient than public transport, in its various forms, and active transport.

Public transport capability and space efficiency

The demands placed on urban space by public transport, whether it be rail, tram or bus, or active transport (walking and cycling), is far less than for passenger motor cars, which are far more space-efficient. Melbourne's trains have a carrying capacity of 700 passengers, trams up to 200 and route buses up to 70 passengers. And, self-evidently, they are much more energy efficient for each passenger kilometre travelled. Motor cars typically may have the capacity for four passengers. But during peak periods in Melbourne, they are on average occupied by only 1.1 persons. So much for all that road space.

A congested freeway said to be operating at 100% capacity at this level of occupancy is actually operating at less than 30% capacity, given that the purpose of transport corridors is for the movement of people, not vehicles.

Another relevant perspective on the relative space efficiency of public transport, and active transport, is demonstrated by the fact that only about 0.5% of the total area of Greater Metropolitan Melbourne is required for the rail network, about 14% is devoted to roads and road reservations.

The Victorian Government recently announced a modest roll-out of electric buses for the Melbourne route bus fleet. Other cities, including Sydney and Brisbane, are more advanced.

Until a few years ago, Public Transport Victoria had a chart on its website which showed the relative energy efficiency of different forms of transport for every kilometre travelled. Then it disappeared. It should be re-introduced, along with a chart that shows the relative space-efficiency of the different modes of transport.

Space for trees in Melbourne?

This is a very important point for a Melbourne which, no matter what we and others do from now on, it is hotter and drier than it has ever been and it will become hotter and drier in future. The issue is: how much hotter and drier? The talk from government now is of maximizing urban canopy tree cover, minimizing the Urban Heat Island effect and so on, primarily as an adaptive, but also a mitigating measure against climate change. But there have never been any realistic commitments by the Victorian government to achieve this.

What we have seen in recent decades is quite substantial loss of mature canopy tree cover in middle suburban municipalities, including the City of Banyule, which is bisected by the North East Link corridor, and a half-hearted attempt to develop canopy cover in more newly developed areas of Melbourne. All within a planning framework unfit for the task.

Greenwash and the North East Link Project

The Victorian Government's current objective is to remove 26,000 trees from the North East Link corridor, together with other vegetation, to clear the way for the additional freeway space.

The government claims that it will "replace" these trees and other vegetation. The reality, though, is that this wholesale destruction is a permanent loss. Trees that may be thirty to a hundred years old are never replaced.

This type of thing is happening in other ways right across Melbourne as the Victorian Government incrementally expands the footprint of the road network to facilitate even more growth in the most space-inefficient of all forms of transport.

Current examples include the reconstruction of the intersection of Main Road and Fitzsimmons Lane in Eltham, together with the removal of bus lanes, construction of the Mordialloc Freeway, level crossing removals at Moreland (over 100 trees removed and a park destroyed) and Surrey Hills (550 trees being removed).

The 20-minute city and the environment

The Victorian Government, from time-to-time, resurrects the concept of the "20-minute city," as environmentally beneficial. Now much clichéd, because nothing has actually come of it, the idea is that cities should be designed in such a way that people are required to travel only short distances for most day-to-day requirements, whether it be employment, education, medical services or shopping. This is admirable, as an ambition. However, at the same time, Victorian government spokespersons have been spruiking the North East Link as the way to travel between such locations as Box Hill, Heidelberg and Greensborough, and to Melbourne Airport.

Away from crisis

Clearly, our urban space needs to be made as conducive to human existence as quickly possible in deteriorating environmental circumstances. We are living on borrowed time.

It is clear that expanding freeway capacity in Melbourne is a wrong turn both for transport and for the viability of the city as a whole in this climate crisis. This is no more so than for the North East Link, the most expensive and destructive of all freeway projects.

One other thought for the Victorian Government, which seems determined to ignore climate change impacts: It remains the case that North East Link was always an economic boondoggle, and was so even before the pandemic. It is certain that it is one now. We require climate change solutions now from an economically responsible Victorian government.

The expenditure of billions on the North East Link and other major road projects shuts out the prospect of resourcing environmentally sustainable transport infrastructure and services for residents right across Melbourne, not just the minority that are adequately catered for now.

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