

Transport and the Carbon Tax

"Households, on-road business use of light vehicles and the agriculture, forestry and fishery industries will not face a carbon price on the fuel they use for transport. Some businesses which effectively pay no fuel excise will face an effective carbon price, through changes to the current fuel tax regime. Heavy on-road vehicles will not face a carbon price from the commencement of the scheme. The Government intends to apply a carbon price on heavy on-road vehicles from 1 July 2014, but notes this measure was not agreed to by all members of the Multi-Party Climate Change Committee."

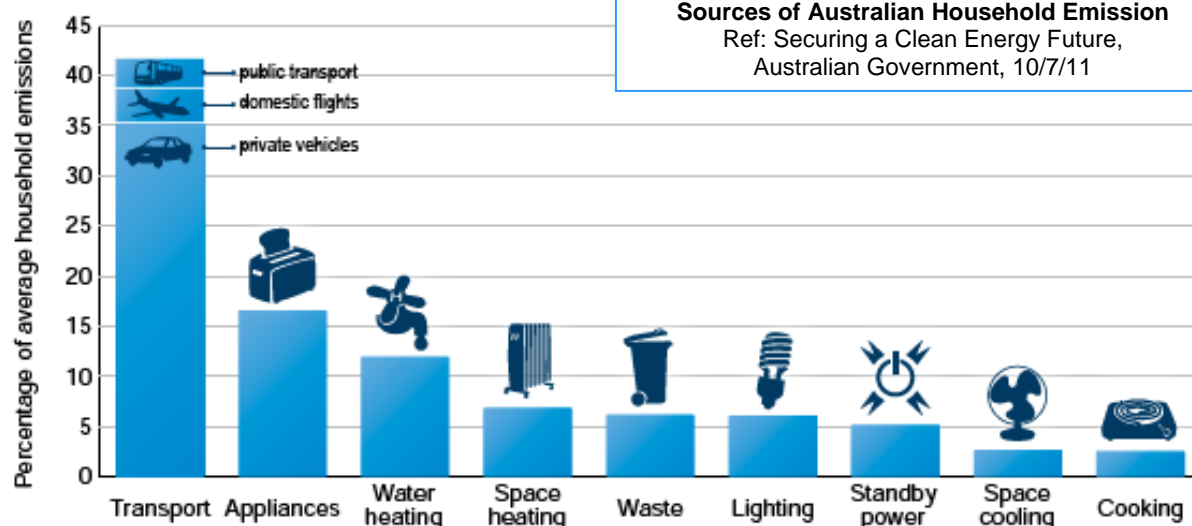
"Households and on-road commercial vehicles 4.5 tonnes and under currently pay the full rate of excise. They will continue to pay excise under current arrangements but will not also pay a carbon price on top of this. Some businesses effectively pay no excise on the fuel they use off-road, as their excise is offset under the fuel tax credits scheme. An effective carbon price will be imposed on some businesses through reduced fuel tax credit entitlements and reductions to the automatic remission of excise on gaseous fuel used for non-transport purposes. The current fuel tax regime provides fuel tax credits that remove or reduce the incidence of fuel tax from business inputs so that fuel tax falls primarily on non-business consumers and light commercial vehicles. By reducing existing fuel tax credits by an amount equal to the carbon price, the Government will impose an effective carbon price on businesses liquid and gaseous fuel emissions through the existing fuel tax regime. Fuel tax credits will not be reduced for the agriculture, forestry and fishery industries. Therefore, these industries will not pay an effective carbon price. ..."

"Heavy on-road vehicles (over 4.5 tonne gross vehicle mass) will not face a carbon price from the commencement of the scheme. The Government intends to apply a carbon price on heavy on-road vehicles from 1 July 2014, but notes this measure was not agreed to by all members of the Multi-Party Climate Change Committee. Gaseous fuels such as LPG, LNG and CNG used for on-road transport will not be subject to an effective carbon price as their eligibility for a fuel tax credit is reduced to zero due to the Road User Charge. ... As aviation fuels do not receive fuel tax credits, domestic aviation fuel excise will be increased by an amount equivalent to the carbon price on an annual basis over the fixed price period to provide an effective carbon price for aviation. From 1 July 2015, aviation excise will be increased on a six-monthly basis, based on the average carbon price over the previous six months. International aviation fuel use is not subject to fuel tax and will therefore not be subject to an effective carbon price."

Ref: Australian Govt Fact Sheet, 10/7/11



'Ah, my dear friend Beryl. Can you explain all of this extraordinary hoo-ha over carpet tax?'



Sources of Australian Household Emission

Ref: Securing a Clean Energy Future,
Australian Government, 10/7/11

Metro, Anyone? (Part 2)

"New technology allows the creation of a low-cost 'light metro' network to serve the middle and inner suburbs. In just ten years between 1997 and 2007 Madrid built 200 kms of line and 150 stations for a cost of just \$50m per km. Compare that with the \$185m per km for the proposed Parramatta-Epping rail link or the \$68m per km average cost for Sydney's 160 kms of motor-ways. Assuming a 25 minute maximum journey time between the centre and periphery, a metro system would have a diameter of approximately 50 kilometres. From central Sydney, that would take in Hornsby, Parramatta and Bankstown, while from central Melbourne it would include Caroline Springs, Craigieburn, Ringwood and Springvale. Lines can be built incrementally and each line can be operated independently and competitively.

"Metro lines need high passenger loads. In Australian cities, they would work best connecting several major suburban centres through the city centre. For example in Melbourne, a line might run between Monash University and Tullamarine Airport via Chadstone, Caulfield, South Yarra, central Melbourne, Moonee Ponds and Keilor. Catching a metro can be as simple as walking from a footpath down one escalator straight onto a platform. Platforms can be as little as 7m below footpath level. With side platforms close to the surface, people can use multiple escalators, stairs and lifts to move easily between the footpath and the platforms. A shallow station with side platforms can have skylights in the footpath to bring natural light and ventilation to the platforms, improving amenity and reducing cost. The need for an underground concourse can be removed if tickets can be validated on the footpath, platform or train, using a stored value card such as Melbourne's Myki or a remotely-sensed RFID chip system, such as used for tolling on many Australian motorways. ...

"The stations can be small enough to be built within the street reserve of almost all main streets in Australian suburban and city centres, reducing costs and property impacts. Stations can be contained within a box only 20m wide. Station length will be typically between 60 and 200 m long, depending on the number of carriages designed for. Stations need to be level or almost so, and straight. If stations are too large to fit within the street reserve, in many cases space under the adjoining properties can be used without affecting the buildings above.

Tunnels for a metro can be smaller than traditional rail tunnels, reducing cost and impact. Using small wheels on the carriages and space-efficient power transmission techniques such as solid rod

overhead power or third rail powering, internal tunnel height can be 5m or less, unlike the 7m needed for conventional rail tunnels. Routes could mostly run under main streets and so to a large extent avoid the costs and problems of tunnelling under private properties. Modern technology in tunnelling and trains means that the tunnels can be built very precisely to almost any alignment, and the trains can run up steep slopes. Tunnels can be constructed using cut-and-cover or by very shallow boring.

"Balancing the walking catchment, travel times and station costs, the optimum spacing for stations along a line is about 1600m. A grid of metro lines, just like a street grid, spreads the load, provides choice of route and means a blockage at a single point doesn't block the whole system. All in all, metros can offer a green transport solution that largely fits under existing public land. Around stations it leads to dense urban form and intensely used pedestrian environments. ... Metro, anyone?"

Ref: Nathan Alexander, UDF, 9/6/11



**Artist's impression of Melbourne's proposed Metro
'CBD South Station'**

Ref: DoT Website, July 2010

Considering Equity in Transport (Pt 4)

"Equity consideration is particularly relevant for multi-modal environments where passengers change from one form of transport to another. In Victoria decisions impacting equity are also all subject to the provisions of the Equal Opportunity Act (Vic), 1995 and subject to individual complaints under the Act. As a result of the Transport Integration Act all decisions that fall under the Act at a local level, and also all under the Planning and Environment Act [1987], also require formal & transparent consideration of equity. Decisions impacting on equity are also subject to complaints and administrative review processes under the Charter for Human Rights and Responsibilities. ... Under the Charter it is unlawful for a public Authority to act in a way incompatible with a human right or to make a decision that does not give proper consideration to a relevant human right. 'The Charter for Human Rights and Responsibilities Charter Guidelines for Legislation and Policy Officers' indicates the Right to Freedom of Movement 'deals with rights of way, easements, roads and road closures, public reservation of land and sale of public land. (Guidance notes: 'The right is closely related to the right to liberty and is also considered to be necessary for access to economic and social rights such as health and social services'. The guidelines offer case law and commentary as instructive on interpreting these rights vii. Each decision-making authority will have established processes for considering issues under the Charter." {Continued in #208}

Ref: Carmel Boyce, 19/4/11 For the full article and the notes contact: Carmel@equityjusticeaccess.com

Travellers Aid Australia

"Travellers Aid Australia officially celebrates providing its 175,000th service to travellers in need at Flinders Street Station. Travellers Aid Australia is a not-for-profit organisation that provides vital travel-related support for everyday travellers in Melbourne. ... At its Flinders Street Station location, Travellers Aid Australia provides a comfortable lounge area, public transport information and internet access to the general public. Specialist services are also available for travellers to ensure everyone is able to participate in their everyday lives. ... Tourists, seniors, people with a disability and the general public are welcome to visit during opening hours. ... Since 1916, Travellers Aid Australia has assisted travellers in need thanks to the ongoing support of a range of organisations including Metro, the Victorian Department of Transport."

Ref: Media Release, Travellers Aid, 8/6/11

More on the 2030 Vic Rail Map

"As a one-time resident of Melbourne and a regular visitor, and as a recently retired South Australian public transport planner, it has always amazed me that the Melbourne tram network, apart from a few recent very long extensions outward into bus territory, still has a network based on pre-1950s Melbourne, with little recognition of the development of regional suburban shopping centres and the growth of suburbs and bus networks beyond. Many Melbourne tram routes now terminate in 'nowhere' – simply at the now arbitrary extent of suburban development of more than 50 years ago.

"The network needs to be extended – not long distances – but simply so that the tramlines actually terminate at major travel destination points e.g., regional shopping centres or railway stations. This will promote more two-way loading along the tram lines, and significantly improve inter-suburban access by linking those tramlines with other tram, train and bus routes at inter-changes at those centres, allowing passengers to transfer between vehicles there. Residents from inner-tram suburbs could travel outward by tram to the major suburban centres, rather than taking the car. These extensions would facilitate travel between outer and inner suburbs. An example of where such extensions have occurred is of course the extension of the Mont Albert Line to Box Hill – although of course this would have been even better if the tram could have turned right into the railway station. Another example is the extension of the Essendon Airport Line to the Airport West Shopping Centre. Examples that could be considered include:

- *A branch of the West Preston or the Bundoora Lines to Northland Shopping Centre (or both).*
- *Extend the North Balwyn Line to Doncaster Shopping Town.*
- *Extend the Wattle Park Line to Box Hill.*
- *Extend the Vermont South Line to Knox City.*
- *Extend the Glen Iris, Malvern, East Malvern and Carnegie Lines to Chadstone.*
- *Extend the East Brighton Line to Moorabbin.*
- *Alter the North Coburg Line to terminate at one of the stations on the Upfield Line."*

Tom Wilson, 10/6/11

My understanding of the reason why Melbourne tramlines often end at 'nowhere' is that historically they and the railways were owned by separate private companies and they did not want to share customers – clearly 'the market' is not always right. The good news is that the current operators of Yarra Trams are seeking to make short extension connections to trip generators like railway stations.

Stephen Ingrouille, 10/6/11

More on New Melbourne Tram Routes

"Couldn't agree more that Southbank suffers from lack of usable tram connections to Flinders St Station and the CBD. {#204} I agree with you that the old Sandridge Bridge has potential. I look at the terminating Elizabeth St trams and wonder about possibilities to extend them south into Southbank. The simplest alternative would be to turn right in to Flinders St and then left over Queensbridge. A more expensive but convenient option would involve the Elizabeth St trams diving under the west end of Flinders Street Station (FSS) with an interchange to the platforms above. Trams could then head straight across the river on a new (but elegant) bridge shared with pedestrians and bike riders, then through between the office buildings to Southbank Boulevard and then via a couple of possible routes to reach the Domain interchange. Trams could alternatively, as in your proposal, climb onto the Sandridge bridge after a sharp right turn on the river bank.

"I have a view that the light rail lines (109 & 96) lose their speed advantages over ordinary trams by joining the street system in Clarendon St, South Melbourne and then slowly making their way into the CBD. St Kilda trains used to take 9 minutes to Fitzroy St. From the Bourke/Elizabeth corner to St Kilda by 96 [now] can easily take 30 minutes. I wonder whether one or both light rail routes should be re-routed via new track in Whiteman St then over the skew bridge to terminate in Flinders St Station (as you propose) or connect to Elizabeth St trams. Convenient interchange would be available at Clarendon St, Queens Bridge St and FSS itself.

"In my view both the Princes Bridge and Flinders St between Federation Square and west of Elizabeth St should be pedestrianised save for trams and bikes. Over Princes Bridge tram extra tram tracks could be laid making four in total. Some St Kilda Rd services could then turn west into Flinders St and provide through running with Elizabeth St services, thus spreading the load from Swanston St to Elizabeth St but retaining the same interchange opportunities across the CBD. As far south as the Domain on St Kilda Rd four tram tracks could provide a pair for express trams and a pair for stopping trams thus relieving the tram congestion at far lower cost than a questionable metro. Melbourne would gain a pedestrianised artistic and entertainment hub (embracing the river) that includes our most iconic intersection (Young & Jacksons, St Paul's, Federation Square and Flinders St Station) and easy connections via a stroll across the river to the expanded artistic precinct which is planned.

"As an aside, the [proposed] North-South metro line would seem sensible, but according to DoT plans because of the depth of digging below the Yarra bed and under the Burnley road tunnel, the distance between the southern city station (at the City Square) to the next station at the Domain would be over 2 kms and would miss servicing a long section of St Kilda Rd including the Arts precinct. A really useful metro would need an intermediate station, and without it I think a large percentage of commuters would continue to interchange to the trams instead, both because of poor metro service and the poor interchange from Flinders St Station to a metro station under the City Square. My view is that we should persevere with better St Kilda Road (and surrounding) trams if convenient metro interchange at FSS and an intermediate metro station near Victoria Barracks cannot be provided."

John McPherson, 15/6/11

Some good points raised here. I really like the idea of turning the area around Flinders Street Station into a permanent pedestrian precinct (with trams and bikes of course). I'd thought about an intermediate station on the metro, particularly given the growth at Southbank but it is not actually that far from City Square to Domain and quite a nice walk. Likewise, there is some value in extending the trams from Elizabeth Street, over the Queens Bridge, then along City Road at least as far as Montague Street. This would link up with the proposed 'outer tram loop' in City Road, which, given the development in the area really needs to be calmed of traffic. Going underneath Flinders Street Station to the Elizabeth Street trams is problematic because of the stream under that street. (If it wasn't for the trams we could have had a nice canal up Elisabeth Street!).

Stephen Ingrouille, 15/6/11

"I note that the diagram of the trams in #204 ignores Burke Rd north of Whitehorse/Cotham Rds. I get very frustrated at the 3rd rate PT along this North South corridor going north. I suggest an extension of the Burke Rd tram at first to High St where it can connect to the High St / Doncaster Rd tram and then in a second stage of development going north along Burke Rd and Macarthur St to Lower Heidelberg Rd, and perhaps Marshall St and Ivanhoe Station. (Connecting instead to Heidelberg station may require a tunnel which would be much more expensive.) This would give the Hurstbridge line a North-South connection through the middle NE and SE suburbs, connecting busy activity centres and schools. The present situation is a bus service which stops at night and on weekends!"

John Merory, 15/6/11

And Also ...

"Researchers from three different countries took more than three years to come up with a mathematical formula to mimic what most children can do by the age of 10. The complex equation which takes into account inertia, gyroscopic and centrifugal forces as well as gravity, has 31 numbers and symbols and nine sets of brackets. The formula boils down to inertia forces plus gyroscopic forces plus the effects of gravity and centrifugal forces equals the leaning of the body and the torque applied to the handlebars of a bike. Or put more simply, if you do not pedal fast enough to keep moving while keeping the bike straight, you fall over."

Ref: MX. 22/6/10

More on the Clem7

"Less than two months after the spectacular collapse of listed toll road operator RiverCity Motorways, its traffic modelling forecaster Aecom faces a \$700 million class action. Litigation funder IMF will bankroll the class action and alleges that Aecom's statements in the PDS were misleading and deceptive and failed to provide investors with full information about another set of traffic figures it compiled on the project 18 months earlier. The case will be a landmark as it is the first time a traffic forecaster has become the target of a class action. It could also open up a can of worms as the spotlight turns to other traffic forecasters, particularly given the poor track record of such forecasting in toll road projects in the past decade. What will make this case interesting is that Rivercity provided an indemnity if the modeller was sued. The impact of the claim from RiverCity investors' point of view may hinge on Aecom and its assets and/or insurance policy - provided it succeeds."

"RiverCity collapsed on February 25 after it was found that it only had enough cash to cover interest payments for a few months. The class action will be thrown open to all shareholders who took up shares in the float of RiverCity, which floated on the ASX in 2006. The issue of two instalments at 50 cents each raised \$690 million. A number of shareholders went back into the market and bought more shares when the share price started to tank on the basis they still believed the traffic forecasts in the PDS. The nub of the claim is that in the Product Disclosure Statement (PDS) Aecom forecast daily traffic numbers in the Clem7 Tunnel, which were chronically inaccurate. Aecom also failed to mention that it provided a different set of traffic figures 18 months earlier to Brisbane City Council's Environmental Impact Study on Clem7, which were vastly different and would have raised questions about the viability of the project, according to the claim. In the PDS distributed to shareholders, Aecom forecast the average daily number of vehicles using the tunnel would be 90,676 within six months of operation and jump to 94,706 after 12 months. ...

"The actual traffic numbers are averaging less than 24,000 per day. RiverCity's financial performance has been so disastrous that on 25 February 2011 it was placed in administration. RiverCity was a tale of woe from the beginning, and follows a number of other listed toll roads across the country that have suffered similar failures and left shareholders with little or nothing."

Ref: Adele Ferguson, Brisbane Times, 14/4/11

"If people are stupid enough to invest money in a tollway at a time when people are screaming for train lines to be built, and when more bicycles than cars are sold, they don't deserve compensation. They deserve to be declared mentally incompetent to handle their own finances. No one deserves financial compensation for wilful stupidity."

Ref: Reader's Comment, Brisbane Times, 14/4/11

The Meguru

"The 'Meguru' is a three-wheeled, three-seat compact vehicle whose single lithium-ion battery allows for a maximum speed and range of 40 kilometres (25 miles) per hour, although the number of batteries could be increased for a longer ride. 'This is a true environmentally friendly car', said Nobuyuki Ogura, the chief executive officer of Yodogawa Group, which built the vehicle in cooperation with three other small companies in western Japan. ... 'It doesn't have a heater, but it's equipped with blankets to keep you warm.'... [It] also showcases traditional Japanese crafts. The body is coated in red lacquer, the floor is filled with recycled bamboo, and the retractable 'window' has been carefully crafted in the shape of a Japanese fan using Japanese 'washi' paper. All were made by craftsmen in western Japan. The company says it is selling the vehicle for around one million yen (\$12,180) while assessing a business plan for mass production. Even disposing of the car after its usefulness has passed poses no problems. 'We've used all-natural materials, so if you ever decide to get rid of the car, simply bury it in the ground', Ogura said."

Ref: Chicka Osaka, Reuters, SBS News, 20/1/11

Second Life for Li-ion Batteries

"When a lithium-ion battery reaches the point at which it can no longer be used in an electric car, it still has the potential to be used in other applications. But exactly what are the best uses for them? The U.S. government is backing a comprehensive study to determine just that, the National Renewable Energy Laboratory (NREL) announced Tuesday. 'To date, no one has comprehensively studied the feasibility, durability, and value of Li-ion batteries for second-use applications', NREL said. The California Centre for Sustainable Energy (CCSE) will lead the research project which will explore the best applications for used lithium ion batteries. Potential uses include employing used batteries as energy storage devices for variable electricity sources like wind and solar that could also tie in to the electric grid. ... The group will also examine how lithium ion batteries might be better designed or manufactured to maximize their potential for second-life uses."

Ref: Candace Lombardi, CNet News, 7/4/11

Fill'er Up Sun

"Motorists with electric cars will be able to 'fill-up' directly from the sun when Britain's first public solar-powered charger opens in London next month. It comes just weeks after Boris Johnson pledged to make London the 'epicentre of electric driving in Europe', promising at least 1,300 charging points by next year – enough to outstrip the number of petrol stations in the capital. Use The Sun, which is managing the project in Rainham and carrying out the installation, says motorists will pay £1 to plug in, and then 63p an hour. A three-hour charge will cost a motorist about £2.90 and deliver a range of about 47 miles. A motorist driving a similar-sized traditional car would spend about £5.90 to travel the same distance. Six cars can park underneath each booth at a time and draw current directly from the sun, into their cars' batteries. When the sun isn't shining, the charger draws power from the National Grid. The facility is being installed at the Centre for Engineering and Manufacturing Excellence."



Ref: London Evening Standard

David Williams, Evening Standard, 24/6/11

And Also ...

"Four young Australians have completed the first leg of a road trip from Tasmania to Norway – and they have done it without stopping at a service station. The men, who are making the 50,000-kilometre road trip using only bio-diesel, have arrived in Darwin after finishing the Australian leg of their journey. The group from Sydney built a portable bio-diesel processor that they use to make fuel."

Ref: Kristy O'Brien, ABC News, 7/6/11

www.abc.net.au/news/stories/2011/06/07/3237554.htm?section=justin

York Street Buses

"York Street in the Sydney city centre is the bane of bus commuters travelling from the city's north, as it transforms into a single line of traffic moving at glacial pace. Many frustrated passengers simply get off at Wynyard and walk towards Town Hall rather than sit in the traffic jam. There is such a backlog at the Queen Victoria Building that commuters boarding buses to suburbs including Balmain, Epping and Lane Cove are also delayed. ... Proposed fixes to congestion over the years have included moving bus lanes and stops to the middle of the road, and banning cars. But the most oft-quoted solution has been light rail. Dr Michelle Zeibots, from the University of Technology, Sydney's, Institute for Sustainable Futures, said light rail just makes sense. 'The demand for public transport services that terminate at York Street has grown so much that buses just can't pick up and put down the crowds of passengers quickly enough. Consequently, they jam up the street', Dr Zeibots said. 'This doesn't mean there's anything wrong with buses. It's just that they aren't designed to cope with really big numbers of people like light and heavy rail, which has more doors to each carriage so that vehicle loading times are faster'."

Ref: Alicia Wood, The Sun-Herald, 26/6/11

More on Algae for Oil {see #201 and #205}

"In recognition of its potential to assist Australia to take advantage of the global economic recovery as well as the commercial opportunities flowing from international efforts to cut carbon pollution, I've granted Major Project Facilitation (MPF) status to Aurora Algae Pty Ltd's cutting edge waste conversion project. The project seeks to commercialise new technology which takes algae and waste CO2 from industrial processes such as those employed in the production of LNG and ammonia to produce: biodiesel for the mining sector; protein-rich biomass for aquaculture and animal feed; and omega-3 oils for human nutrition. If given the final go ahead, Aurora Algae expects to have its first commercial scale facility up and running in the Western Australian town of Karratha by early 2013. It's a \$100 million project which would create more than 200 jobs during construction and up to 100 ongoing full time jobs."



Unrefined algae oil is also known as 'green crude'

Photo: Sapphire Energy, CNet News

"With the right support from government, Australia can become a world leader in renewable technologies such as those being pursued by Aurora Algae, with the real potential of creating tens of thousands of highly skilled 'green' collar jobs and new export opportunities. All up, the Gillard Labor Government has so far granted or renewed MPF status to projects worth more than \$100 billion with the potential to create up to 39,000 jobs across the vital sectors of infrastructure, mining and resources, and advanced manufacturing."

Ref: Anthony Albanese, Federal Media Release, 1/6/11

MPF Website: www.majorprojectfacilitation.gov.au