

Problems with Fossil Fuels

"US President Barack Obama ... who is determined to hold BP accountable for the largest environmental disaster in US history, said it was time to embrace a 'clean energy future'... Pledging to do 'whatever's necessary' to return the Gulf to its natural state, Mr Obama also urged the world's biggest consumer of fossil fuels to respond to the disaster by accelerating its transformation to renewable clean energy. 'We cannot consign our children to [an oil-dependent] future', Mr Obama said. 'The tragedy unfolding on our coast is the most painful and powerful reminder yet that the time to embrace a clean energy future is now. ... 'The oil spill is not the last crisis America will face' Mr Obama said."

Ref: Simon Mann, The Age, 16/6/10

"The fossil fuel industry has shown us its even uglier side this year. ... And while the BP calamity is by far the worst, there have been multiple oil- and gas-related disasters this year that have barely made headlines. As events like this continue to add great cost – human and monetary – to the already high toll of fossil fuel dependence, we're starting to see a monumental shift in the way the [US] nation views the energy industry." Ref: Nick Hodge, Green Chip Stocks, 15/6/10

"Exxon Mobil chief executive Rex Tillerson said that that 'we would not have drilled the well the way they did'. Chevron chief executive John Watson said that 'it's not a well we would have drilled' ... But criticism from senior House Democrats that oil-spill response plans were 'cookie cutter' illustrated the rough ride facing the oil chiefs at the first industry-wide hearing since the oil spill began more than eight weeks ago. ... Henry Waxman, a Democrat and the chairman of the panel, said that oil-spill response plans provided by the companies to the committee show that Exxon Mobil, Chevron, ConocoPhillips and Royal Dutch Shell 'are no better prepared to deal with a major oil spill than BP'. He said that while four plans discussed how to protect walrus, 'there are no walrus in the Gulf of Mexico'." Ref: Siobhan Hughes and Tennille Tracy, The Australian, 16/6/10

"One thing is absolutely certain, and we must face it. Resources such as oil will become

increasingly scarce; this will increase the costs and the environmental risks of finding more. Unless we face this reality and accept some personal responsibility, we must accept the increasing risks of environmental disasters with the consequences of them impacting our health and quality of life. The greatest change that may arise from this oil spill is that individuals may consider how sustainable their investments and lifestyle choices really are. ... If we all invested in sustainable options, imagine the wake-up call to the corporate world. We may see the end to the race for oil; the technical development and exploration of more renewable and viable energy sources and more energy efficient processes."

Ref: Arek Sinanian, ABC - The Drum, 15/6/10

"I am astounded by the continued naming of this as an oil spill. It is not an oil spill. This is a hyper-pressurised geyser of abiotic oil and natural gas which is tapping a potential mother-lode field. This is a volcano."

Ref: 'Kaliyuga', ABC - The Drum, 15/6/10



'And they call us dangerous!'

Colour-Blind-Friendly Traffic Lights

"A newly designed traffic light called the UniSignal (Universal Signal Light) aims to make the difference between green, amber and red a little easier to discern. The brain-child of three South Koreans designers - Ji-youn Kim, Soon-young Yang, and Hwan-ju Jeon - each light in the UniSignal system is a different shape so those of us who can't tell the difference between the three colours can easily pick the shape of the light instead. The UniSignal system allows drivers to know which shape they should be looking for, even if they've just picked up a hire car in a different country [where lights may be in a different order]. And if the UniSignal system were to be rolled out worldwide, colour-blind car-hirers might even be able to opt for a lower level of insurance cover."



Ref: Matt Campbell, The Age, 15/6/10

"Is it me or does it look like an arrow indicating go forward when the red light is on. Isn't an octagon universally considered stop?"

Ref: 'Ben', Comments, The Age, 15/6/10

The Curse of Cars (Part 1)

"Australia has become one of the most car-dependent nations, and Sydney is probably its most car-dependent city. Cars are expensive, one of the least cost-efficient methods of moving people from one place to another. We use 12 to 15% of our collective wealth to pay for it. By contrast, cities that have strong rail networks, as many European cities do, use 5 to 8% of their wealth on transport. With oil resources dwindling and climate change bearing down on us, we are not well positioned for the future. But with the Christie report, the NSW state government has a golden opportunity to turn things around and secure a sustainable transport future for Sydney.

"The report's primary aim was to show how we can have a workable transport system that will allow Sydneysiders to get around in a cost-efficient way, in less time than it does now and with fewer hidden costs - including social ones - than the system we have now. The transport policies of successive state and federal governments have left us with massive hidden costs. One big cost to our community results from congestion on our roads. Across Australia, this has been estimated by the federal government at \$21 billion - and that was just for 2006. Sydney has a quarter of Australia's urban population; the cost burden for the people of NSW is massive. It comes not only in wasted time and fuel but in productivity losses. Every time you get in a plumber or other tradesperson, you pay for that lost time in higher charges. ...

"Another cost is the road toll. Every year about 1600 Australians are killed in motor vehicle accidents and 30,000 more are seriously injured. Every year the government delays improving public transport, or establishing safe cycleways, means avoidable deaths are added to the toll. The federal government's infrastructure department found that car passengers were 10 times more likely to have a serious injury than those in trains, based on distance travelled. It estimates that car accidents cost our community \$18 billion a year. A third cost is health. Encouraging walking and cycling for short journeys would be a cost-effective way of tackling the obesity epidemic which is fuelling diabetes, heart attacks and strokes. These 'externalities' - air and noise pollution, road accidents, physical inactivity and the contribution to greenhouse gases and global warming - are costing us dearly. That's before we consider other social impacts such as social exclusion for those who don't drive and have inadequate access to public transport.



"We need to update our thinking about transport so the costs are no longer hidden and so they reflect what fossil fuels are really costing us. The federal government's fuel excise, for instance, is the fourth-lowest in the world, according to a Treasury report on Australia's future tax system. It goes nowhere near paying for all the hidden costs of road transport. To do so, we should be paying fuel excise of \$1.33 a litre - 3½ times what we pay now. The politics of that mean it's unlikely to happen, but we need to go some way towards reflecting the real cost to society of using fossil fuel-dependent cars. The revenue from removing fossil fuel subsidies should be used to provide better, safer, more sustainable transport.

"As a nation we urgently need to prioritise investment in the public transport, cycling and walking networks of our cities. We need governments to look ahead 10 & 20 years and help us make the transition away from oil dependency, with all its hidden costs, towards a sustainable transport future. In NSW, the Christie report provides a chance for our new Premier to show us what she is made of, and give us a vision of which we can all be proud. She could start by investing in a program to maximise the opportunities for people to use public transport and get rid of the second car. For when a family gets rid of its second car and puts the savings in superannuation, they can save more than \$750K over a working life. Think of the benefit to people, communities and the economy of just that switch."

Ref: Gail Broadbent, SMH, 19/2/10

"The Rapid Active and Affordable Transport Alliance notes the following points: 'Road building costs can range from \$3,860 - 13,250 per passenger kilometre travelled for 4-lane dual carriageways whereas two track railways cost about \$847 per passenger kilometre travelled'. And 'Public transport-based cities spend around 5-8% of their wealth on transport services, but in heavily car based cities this is 12-15%'."

Ref: 'Phillip', Comments, SMH, 19/2/10

"We live in a global market and there is only so much fuel produced every year (and we may well be past Peak Oil). With rapidly increasing numbers of Chinese and Indians now being able to afford to buy cars, their requirements for fuel will push world oil prices way above the pathetically cheap prices that currently exist, to be exacerbated by a world economic recovery at some time in the coming years probably \$5 to \$10 a litre! Australia must start making moves to lessen their dependence on so many of Australian's drug cheap oil!"

Ref: 'Webbr', Comments, SMH, 19/2/10

Tale of Two Melbourne Cities

“Car parks are highly prized on Efterpi Soropos's street in East Brunswick. So much so, that after a fancy restaurant opened close to her home in 2008 and the competition for spaces intensified, she stopped driving her car altogether so she could be sure her spot was never taken. Recognising the absurdity of the Seinfeld-esque situation, she eventually sold the car and began taking public transport to her job at Monash Medical Centre in Clayton. It turned out the journey took only 15 minutes longer by tram and train than by car, but it had the advantage of reducing her morning stress and allowing time to do some work on the way in. ‘I got so sick of looking for a park in my street and my car constantly being scratched. It was so stressful and there is a tram stop on the corner. In the end it was easy’, Ms Soropos said. With its multiple public transport options, footpaths and cycling tracks and higher density housing closer to facilities, the City of Moreland, where she lives, has more residents managing without a car (15%) than the Melbourne average (9%). But for Ms Soropos, there was still the problem of what to do about grocery shopping, her son's occasional night-time sports training, and visiting far-flung friends. She found the solution two blocks away. Ms Soropos joined Flexicar, one of a handful of car-share companies operating in inner Melbourne. Her plan costs \$200 a month, which allows her the use of a car for up to 20 hours whenever she needs it - for \$9 an hour. Selling her car has meant some adjustments: she walks and cycles more, and does all her supermarket shopping in one big hit once a fortnight rather than over several trips. But apart from the odd occasion, she doesn't miss it.”

Ref: Deborah Gough, The Age, 21/3/10

“There are four cars parked outside the Soni household each night - one for every adult in the Point Cook North home. Raj Soni, who shares the house with his wife, two adult relatives and two children, is conscious of the impact on the environment, but feels the family has no choice. With jobs in four separate places, infrequent buses, a train station kilometres away, and walking and cycling out of the question, the family faced a nightmare each night as they negotiated over the use of the one car they once shared. ‘We would all sit around and plan every night - it was impossible. Eventually ... we ended up getting a second car’, Mr Soni said. But Mr Soni, the project manager for a South Melbourne IT company, and his wife Kirti, a Medibank Private worker at Werribee Plaza, realised it was still unmanageable. So they opted for third and fourth cars for his cousin Shyam Kalyanji, an

Altona accountant, and his wife Roshni, a Wyndham veterinarian. While four adults living together under the one roof might not be the norm, four-car families are not out of the ordinary in Point Cook North. The suburb is singled out in the ACF report, which says poor planning is funnelling residents into their cars, even for short trips. Raj Soni agrees that the suburb's set up made the family's decision to opt for four cars inevitable. He says there are too few footpaths, the local bus service runs only hourly, and busy roads with poor crossings discourage walking. ‘Most of the time, with the shopping centre less than two kilometres away, you would think that we would walk with the kids, but it is not really a place to walk to and we just drive’, he says. ‘I wish I had a better option.’”

Ref: Deborah Gough, The Age, 21/3/10

“Poor design and weak guidelines governing new suburbs in outer Melbourne are increasing car reliance, with residents forced to drive to local facilities. A new report by the Australian Conservation Foundation ... shows that the emphasis on low-density housing in outer suburbs means fewer people live within walking distance of facilities such as public transport, schools and shops. And those who do are discouraged from leaving the car at home by a lack of basic infrastructure, such as bike and footpaths leading to amenities, bicycle storage facilities, bus shelters and safe road crossings.”

Ref: Deborah Gough, The Age, 21/3/10

Comparing Two Urban Developments

“The Werribee Plains Transport Research Study was undertaken ... to examine how effective urban planning is at reducing car dependency in Werribee Plains [west of Melbourne]. The study evaluates two case studies, Toolern (T) and Point Cook North (PCN) to understand how planning processes have worked toward reducing car dependency.”

Residents are within:	PCN	T
▪ Walking distance of a bus line.	56%	84%
▪ 800m of a train station.	0%	6%
▪ 2km of an employment zone.	82%	66%
▪ 800m of an Activity Centre.	62%	86%
▪ 600m of open space.	62%	97%
Walkability ranking:	14%	64%
Cyclability ranking:	0%	50%

“The study presents a series of tools which planning professionals or local interest groups might use to assess and monitor progress in addressing car dependence into the future.” **Ref: Werribee Plains Transport Report, ACF, 2010**
www.acfonline.org.au/uploads/res/Werribee-Plains-Transport_Report.pdf

Architectural Award for Train Stations

"A train station may not be the most glamorous of architectural assignments. But with small footprints and sustainability a focus at the NSW Architecture Awards ... it's fitting the top public architecture prize should go to a piece of public transport infrastructure. In Sydney on Friday, architecture firm Hassell was presented with the Sulman Award for public architecture for its work on four stations along the Chatswood-Epping rail link. The jury said they set a new benchmark for Australia transport design."

Ref: Penny Durham, *The Australian*, 21/6/10

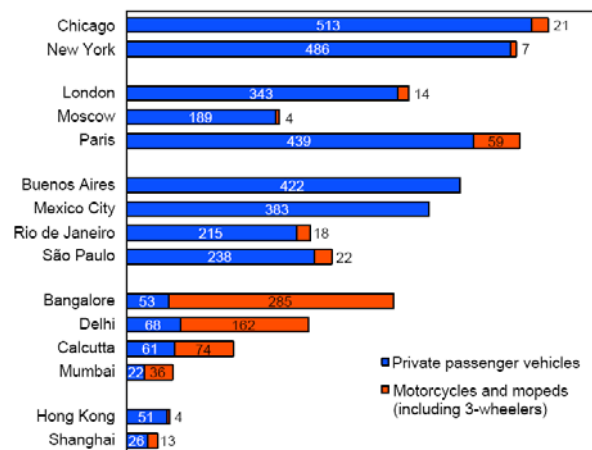
The Future of Megacities (Part 2)

"The highest ownership of private vehicles is in the North American metropolitan areas, followed by the European and Central/South American metropolitan areas, while it is substantially lower in the Indian and Chinese metropolitan areas. However, motorcycle ownership in the Indian metropolitan areas is high."

{Continued in #161}

Ref: University of Michigan Transportation Research Institute, February 2010 See:

<http://deepblue.lib.umich.edu/bitstream/2027.42/65001/1/102514.pdf>



Private passenger vehicles and motorcycles per thousand inhabitants (mostly for 2001)

Problems with Truck Drivers

"A report in *The Age* indicates that one in two trucks inspected by VicRoads had a serious safety fault or a problem with the driver. Of 8828 inspections in Melbourne's northern and western suburbs in the year to last January, 3,943 trucks were found to have safety faults while 182 truck drivers were caught using a mobile phone while driving and 109 had no licence. Another 285 drivers were caught behind the wheel of an unregistered truck and 1,640 fines were handed to drivers with unsafe or defective trucks."

Ref: X-Rail Digest, June 2010

Innovative Bike Parking

"The Delaware Valley Green Building Council (DVGBC) hosted its sixth annual sustainable design competition. ... With sustainable transportation at the forefront of Philadelphia's current urban issues, the competition challenged participants to design a sustainable bicycle transit centre."

The second place prize went to Sara Petit and Marco Virgili, and their innovative bike storage system.

Ref: DVGBC website, 2010

See details at:

<http://dv gbc.org/content/2010-sustainable-design-competition-results>



'Take it Easy. Take the Bus.' *

Last Thursday evening I chose to catch the bus to Doncaster (a suburb close to the geographical centre of Melbourne). The bus arrived empty – compare with trams – at the CBD stop in Lonsdale Street and surprisingly for the hour (6pm) only eight passengers got on. My seat had insufficient leg room so I moved up to the front, across from the driver. We picked up and discharged a couple of passengers along the way but basically the bus was never more than a third full. Mind you, this was more than most of the other buses I saw which seemed to have between zero and four passengers on board. Earlier in the month the Minister for Public Transport was singing the praises of road funding and the benefits of road-based public transport. Meantime our bus crawled through the CBD until it was stranded in car congestion in Victoria and Hoddle Streets. Why is it so hard to get a dedicated lane for buses, taxis, carshare and emergency vehicles? Our driver reported to his base that we were running late.

My talk on sustainable transport at Doncaster finished just before 9.30pm. The bus stop across the road from the civic centre had a real-time information panel but it was not operational. Was it broken? Was it not yet commissioned? A timetable on a post indicated that the last 307 bus back to the CBD was at 8.24pm, and the next (and last) 207 bus was at 10.21pm. It was cold and I was stranded. No wonder so few use the bus.

* Slogan from a ¼ page ad in Sunday's *Age* (20/6/10). Take the bus, take what bus?

Tearing Down Motorways (Part 2)

"The idea that it's possible to remove a major road without creating traffic jams is not exactly a recent one: Portland proved its merits more than 30 years ago. Until the early 1970's – a period when the city's now-thriving downtown area was losing the battle with urban blight – there was a four-lane freeway known as Harbour Drive occupying the western shore of the Willamette River, creating a barrier between the downtown area and the waterfront. Even citizens and a few politicians began arguing in favour of taking down the road in the late '60s though, Oregon's Highway Department wanted to widen the thoroughfare. Ultimately, the most important advocate for its demolition was then-governor Tom McCall. After a long and contentious political battle, McCall prevailed and the highway was closed in 1974. On the first day it was shut off to traffic, one of the highway engineers who predicted gridlock catastrophe reportedly called one of McCall's lieutenants to congratulate him: there hadn't been 'a ripple' of disturbance in the city's traffic flow. By 1978, a greenway occupied the land where the Harbour Drive once stood. Twice expanded since then, the Tom McCall Waterfront Park is an integral part of Portland's success in recreating itself as a 21st century city." {Continued in #161}

Ref: Yonah Freemark and Jebediah Reed, The Infrastructurist, 6/7/09

www.infrastructurist.com/2009/07/06/huh-4-cases-of-how-tearing-down-a-highway-can-relieve-traffic-jams-and-help-save-a-city/

"The Harbour Drive tear-down was probably instrumental in improving bicycle commuting in Portland as most bicyclists (like myself) live on the east side of the river and come across to the west. The Harbour Blvd would have been a massive barrier to this. The Hawthorne Bridge [pictured above], has the more bicycle traffic than any bridge in the US. If bicyclist had to contend with the harbour on-ramp pictured, this would not be the case."

Ref: 'Zoomit', Comments, The Infrastructurist, 9/7/09



**Before and After Case 2:
Portland, Oregon
Harbour Drive**



Transforming Portland, Oregon (Part 1)

"During the mid twentieth century, traffic engineers sliced freeways through Portland, as they did in other American cities. In 1942, Harbour Drive was completed. It was a four-lane freeway along the west bank of the Willamette River, which cut off pedestrian access from downtown to the river. This public works project, funded by the Roosevelt

Administration to stimulate the economy, was called an expressway and was not built to modern freeway standards, but the illustration shows that it did meet the usual definition of a freeway: it was a limited access road, closed to pedestrians and to cross traffic, with access through freeway interchanges. In 1960, the state completed the Portland/Vancouver Metropolitan Area Transportation Study, which proposed building 50 new freeway projects by 1990. As in other cities, the freeway system planned in the early 1960s was so extensive that it would have sliced up the metropolitan area beyond recognition. As in other cities, most of the proposed freeways were stopped because of lack of funding and because

of the citizen's freeway revolts of the 1960s and 1970s. In 1964, the state completed the first freeway proposed under this plan, I-5, sometimes called the Minnesota Freeway, along the east bank of the Willamette River. Now, the public had lost access to both the west and east bank of the river." {Continued in #161}

Ref: Preservation Institute, 2007

www.preservenet.com/freeways/FreewaysHarbor.html

Regional Rail

"We've increased investment in the interstate rail network almost five-fold to \$3.4 billion – money that's building 235 kilometres of new track and upgrading a further 3,771 kilometres of existing track, almost all of which is in regional Australia. ... We've acted to restore rail to its rightful place at the heart of the nation's transport system."

Ref: Federal Ministerial Media Release, 9/6/10

Heart and Soul of the City (Part 2)

"The demolition of a vast motorway through the centre of South Korea's capital and the restoration of a river and park in its place proves that mega-cities can be changed for the better."

"The vision was ordinary enough: to create a focal point of both historical significance and aesthetic appeal, with the Cheonggyecheon triggering long-term economic growth, attracting tourists and investors alike, but it meant thinking the culturally impossible. The road carried 160,000 cars a day and was perpetually jammed, but was still considered indispensable for the city's economy. If the fate of the river has reflected Seoul's urban development in the last century, the motorway was seen as a proud but decaying symbol of South Korea's emergence from a rural to an industrial economy, and of the investment of the lives that had

been sacrificed to achieve it. So to tear it down was 'above all, a symbolic act', says Kee Yeon Hwang, a professor in the department of urban planning and design at Hongik University and who was involved in the project from the start. He led the feasibility work in the late 1990s, and was the principal author of the Masterplan. 'The idea was sown in 1999', Hwang says. 'We had experienced a strange thing. We had three tunnels in the city and one needed to be shut down. Bizarrely, we found that car volumes dropped. I thought this was odd. We discovered it was a case of "Braess paradox", which says that by taking away space in an urban area you can actually increase the flow of traffic, and, by implication, by adding extra capacity to a road network you can reduce overall performance'.

"He and his team asked thousands of people what they thought was the most important thing in the city, and they all said the environment and water. The research team spent six months investigating what would happen to the traffic and developing a forecasting model which said it would slightly improve the traffic overall. It was put to the electorate that the motorway should be removed, and Mayor Lee [Myung Bak] was elected partly on the environment ticket. 'There were worries about the traffic', says Hwang, 'but we explained what would happen, and that there would be alternatives, and they began to understand'.

"Work started in July 2003. It had taken 20 years to build the roads and to obliterate the river, but it took contractors just two years to pull them down



The Cheonggyecheon in Seoul

and restore it. It cost \$380m (£201m) and required 620,000 tonnes of concrete and asphalt to be removed and recycled. Twenty-two new bridges were built, and the water in the river was restored, albeit mainly from groundwater. There was fierce opposition and protests to begin with from nearby traders, who feared that cars would no longer be able to get there, and thousands of hawkers and other people who used the space below the motorway were forced to leave. They were eventually relocated. But other opposition came,

unexpectedly from urban planners. 'They did not like it', says Hwang. They always want to build more roads to survive. To start with, I felt very alone. Nobody wanted to talk to me. But I was very confident about our traffic forecasting model.

"Ordinary people were a bit sceptical to start with, but then when they saw the river reappear, they got very excited. The tearing down of the motorway has had both intended and unexpected effects. As soon as we destroyed the road, the cars just disappeared and drivers changed their habits. A lot of people just gave up their cars. Others found a different way of driving. In some cases, they kept using their cars but changed their routes'.

"The city had beefed up its bus service and given people options to avoid the motorway, and the effect on the environment was remarkable. Hwang says: 'We found that surface temperatures in summer along the restored river were an average 3.6 degrees Centigrade lower than places 400 metres away. The river is now a natural air conditioner, cooling the capital during its long hot summers. Average wind speeds in June this year were 50% higher than the same period last year. It was extraordinary. Also, many birds came back, plus fish, insects and plants. The variety of wildlife has vastly increased since we tore up the road'.

"The scheme has had a ripple effect, Hwang says. A new mayor has come to office and he is now getting to work on the Han River, an important river that is not at all pedestrian-friendly. He is going to shrink the road space for cars and replace it with pedestrian walkways. Shanghai is thought to be considering a similar, though smaller, scheme. Tokyo has an elevated road above an ancient bridge and is investigating the possibility of removing it and other cities in East Asia are taking an interest." {Continued in #161}

Ref: John Vidal, The Guardian, 1/11/06