

Running on (and out of) Oil

"The world is running out of oil, the source of 80 per cent of all world energy. Smart countries will start preparing for this now. Dumb countries will keep postponing the adjustment. We can't foresee the precise day and the hour when we squeeze the final drop out of the planet. But we have some educated guesses. The International Energy Agency, a specialist research body set up by 28 of the governments of the world's rich countries, calculates that the known reserves of oil will run dry in about 40 years at current rates of consumption. More speculatively, it might be possible to extract another 60 years' supply from oil reserves which are not fully proven or yet discovered, the agency estimates. These estimates are not realistic. They are based on current rates of consumption, when we can see that the long-run rate of consumption is actually going up. The big oil cartel OPEC predicts that world demand for oil will rise by about 40 per cent over the next 20 years in the absence of major policy change. This, of course, would bring forward the day of reckoning. So there is plenty of room for error and uncertainty in forecasting. There is only one certainty: 'One day, we will run out of oil, it is not today or tomorrow, but one day we will run out of oil and we have to leave oil before it leaves us', the IEA's chief economist and formerly an economist with OPEC, Dr Fatih Birol, said this week. 'The earlier we start, the better, because all our economic and social system is based on oil, so to change from that will take a lot of time and money', he told a British newspaper, The Independent. This is simple common sense. Smart countries will start the adjustment now."

Ref: Peter Hartcher, SMH, 8/8/09

"New Zealand drivers trying to squeeze the last kilometre out of an empty fuel tank may soon face more than just the embarrassment of breaking down. Moves are underway to make it illegal for people to run out of petrol on Auckland's motorways. New Zealand police say they have noticed a big increase in the number of people running out of fuel since petrol prices soared last year. Over a three-week period, they were called out to assist 148 vehicles with empty tanks, including three trucks. Police say breakdowns are often dangerous and are adding to congestion. New Zealand's transport agency is considering making it an offence to run out of petrol on motorways around Auckland. Drivers could soon be hit with a \$200 fine."

Ref: Kerri Ritchie, ABC News, 25/9/09



Urban Sprawl

"Governments and developers in Victoria and NSW have advanced the argument that Melbourne and Sydney Growth Boundaries must be extended for the use of cheap fringe land. The land is not cheap for fringe families when they realise they need two and three cars to get to employment, schools, shopping, services, recreation etc. For fringe area families the cost of cars is often more than the cost of the mortgage. And the price of fuel is not coming down any more. The new zones proposed in Melbourne's outskirts are on average more than 4 km from any feasible public transport." **Ref: Brian Buckley, 25/8/09**

Blurring the Urban-Rural Line

"He stopped using pesticides and fungicides on his fruit, berries and vegetables years before organic became iconic, and long ago eliminated the middleman distributor by selling direct at his fruit stands and at seven farmers markets. ... But not even Larry Thompson has grown a city before, and his ideas this time would turn Oregon's heralded land-use system on its head. The region's growth regulators seeded the new city of Damascus on Thompson's 77-acre farm. In Thompson's vision, the city can be a place where urban development and agriculture entwine like his graceful marionberry canes. Part of the farm could be developed for housing, he suggests, while he continues to farm the better soil. The farm's crops could supply an 'eco-restaurant' at the top slope of the property. Along the road below could be a fruit and produce stand. Next to it could be a community kitchen and education centre where customers could preserve the berries they just bought or learn how to improve their home gardens. Thompson acknowledges the idea 'steps way out of bounds'. Because if it's done nothing else, Oregon has drawn a bright line between urban and rural. Development occurs within tight growth boundaries; farming and forestry happen out in the country. Period. Thompson says it's time to blur those lines. 'Instead of saying, "Here's the boundary for growth", maybe we should start with the farm first and create the community around farms', he says. 'That's my intent'. Metro, the regional government, planted Damascus on the edge of Portland in what many now see as a confounding expansion of the urban growth boundary. A lack of infrastructure - adequate sewer, water and roads - made traditional development severely expensive, and Damascus became the punch-line to the area's development joke."

Ref: Andre Meunier, The Oregonian 8/8/09

See also VEIL Sustainable Cities Net:

www.sustainablecitiesnet.com/2009/09/10/new-urban-sprawl/

On Melbourne

"Finally cajoled into taking the long trip to Melbourne, I was told to expect a city where walking abounded, where the streets were flowing with energy, where the quality of public space would blow my mind. Little did I know my already high expectations would be pleasantly exceeded. Melbourne is simply wonderful. You can get lost in the nooks and crannies that permeate the city. As you walk you feel like free-flowing air with no impediments to your enjoyment. For a city with nearly 4 million people, the streets feel much like the hustle and bustle of New York City but without omnipresent danger and stress cars cause. There is an invaluable lesson here. In the early 90s, Melbourne was hardly a haven for pedestrian life until Jan Gehl was invited there to undertake a study and publish recommendations on street improvements and public space. Ten years after the survey's findings, Melbourne was a remarkably different place thanks to sidewalk widenings, copious tree plantings, a burgeoning cafe culture, and various types of car restrictions on some streets. Public space and art abound. And all of this is an economic boom for business. Melbourne is a new world city; it has a modern grid much like a typical American metropolis. Naysayers who do not believe a city can be radically transformed say that the already narrow streets of many European cities make it easier to have good pedestrian environments there. Melbourne proves that isn't necessarily so."

Ref: Clarence Eckerson, Street Films, 5/5/08
<http://www.streetfilms.org/archives/melbourne/>

"This small part of Melbourne - the CBD - is fantastic (although there are problems creeping in, 24hr binge drinking violent crime etc) it's important to remember that Melbourne is a city of 3.5mil ish people and most of it is rubbish. Not trying to be the wowser I just think that we need to make the whole city good, because at the moment Melbourne really is a tale of two cities." **Ref: 'Chris', Street Films Comments, 28/7/08**
<http://www.streetfilms.org/archives/melbourne/>

And Also ...

"All Nippon Airways is asking passengers to visit the toilet before boarding in a bid to reduce carbon emissions. ANA says empty bladders mean lighter passengers, and it hopes the weight saved will lead to a five-tonne reduction in carbon emissions over a month."

Ref: The Age, 7/10/09

And Also ...

"The Naturmobil, the brainchild of an Iranian engineer, Hadi Mirhejazi, combines 19th-century travel with 21st-century gym equipment. In essence it is a horse, tethered to a treadmill, inside a perspex box on wheels. The driver and passenger sit in the front (the prototype is a two-seater sports car), while the horse is in the back. To get moving you simply turn on the treadmill and wait for the 'engine' to start trotting. The horse's movement, aided by 20 gears, recharges the treadmill's battery, and keeps the vehicle moving. It can go at quite a canter, reaching 28mph during a road test. Mirhejazi spent more than two years building the Naturmobil, and says he uses 'many types of technology to make the horse comfortable'. The animal sits under a jacket of cold water. For the more delicate problem of 'emissions', Mirhejazi straps on an extra-large colostomy bag. The waste is then collected beneath the treadmill, 'so the road will not get dirty or smell bad'; a selfless design, given there is no partition between horse and driver. There are a few drawbacks. Despite the horse's cooling system, the Naturmobil is not suitable for hot climates. Motorways and main roads are also off-limits. Mirhejazi had hoped to attract advertising for the vehicle's exterior, which could host two LCD screens. The plan was to take a publicity road trip around the world. Alas, the plan never came off. Mirhejazi has offered to give away the prototype, patent, and \$100,000 to anyone who can explain why the Naturmobil was really invented. ... It seems the inventor himself is not entirely sure."

Ref: Harry Byford, The Guardian , 17/8/09

"Great idea - now we can get gym-goers to take us to and from work - and they will be happy to pay of course. To the naysayers - have you seen anyone on a gym treadmill actually get anywhere?"

Ref: 'vertical', The Guardian , 17/8/09



The Naturmobil can gallop to speeds of 28mph.

Photograph: Public Domain, The Guardian

Making Transport Attractive (Part 2)

"The invention of the combustion engine opened the market to the new, glamorous, convenient and street-friendly (at least initially) individual vehicles. At the turn of the century, the oil industry was on the verge of collapse because electricity was replacing oil lamps but it adapted quickly to the new market created by the advent of the mass-produced automobile.

"The combined forces of the oil, the automobile and the road construction industries created an even mightier lobby than the rail barons at the peak of their strength. Roads financed entirely by taxpayers replaced the earlier user-financed toll roads, designed, built and maintained by the private sector. The 'automobile' welfare state was to go much further. While the tramway companies had to pay for their track investments and maintenance and charge their passengers accordingly, the automobile used the space it consumed to run and to park without specific charges. Meanwhile, the commercial speed of trams was jeopardized because they had no segregated right of way and automobile traffic clogged their tracks.

"At that point, the automobile industry in America and elsewhere did what would be expected - it bought up the ailing tramway companies, closed services and replaced them with its buses. In many places, the ailing tramway companies were taken over by government, becoming part of the public sector and subject to the management style of subsidized public services. In most cases, the tram tracks were pulled up and services replaced by buses that were slower, noisier, less comfortable, and more polluting than the replaced trams.

"In Paris, the transport authorities were heavily influenced by a well-orchestrated media campaign and abandoned the entire tram fleet of more than 3000 cars - many brand new - in just 5 years between 1932 and 1937. The trams were replaced by a fleet of buses produced by the national automobile industry. This historic reminder helps us understand that the rise of 'automobility' was the result of a coherent and broad-ranging multi-sector marketing strategy as much as it was the result of spontaneous individual preference. In particular, 'preference for space' occurs when space becomes available at less than full cost. This was indeed the case. Not only were the streets and roads made available free of charge but a wide range of market incentives were made available to buyers of individual detached homes. The most famous incentive was the post-war GI Act in the USA

that offered vast home-buying subsidies and generated the Levitt Towns and thousands of suburbs. The standard form of urban growth in the USA became leapfrogging - land developers buying up tracks of cheap agricultural land ever further from built-up areas. However, instead of providing the connection to the city at their own cost as Empain did in Cairo, they only had to ensure that the government-financed road programmes (under the Federal Highway Act, etc.) guaranteed the connection. Consequently, land plots and homes could be sold at bargain prices assisted by the Federal and State subsidies.

"These mechanisms were copied worldwide. In Europe, several countries even went so far as to introduce tax deductions for commuting by automobile. In terms of transport markets, this low density form of urban development favoured the automobile and excluded public transport from most of the market. More importantly, it maximised kilometres travelled and fuel consumption. As a result of this deeply unequal competition, public transport services gradually gave way to reliance on the automobile. The private sector left the realm of public transport which became a government-provided barebones service that was affordable by all but far less attractive, giving the automobile the largest modal share."

{Continued in #127}

Ref: Pierre Laconte, Light Rail: Making Urban Transport More Attractive, Japan Railway & Transport Review 38, March 2004

Melbourne Marathon

Melbourne usually manages large sporting events with a degree of public transport sophistication particularly when they are located in the sporting precinct near the MCG. So with 28,000 runners, plus thousands of officials and spectators, you'd think we could organise some public transport on Sunday morning, but as the race manual says: "With start times of 7.00am, 8.00am and 7.30am respectively, public transport is not an option for Marathon, Half Marathon and 10km competitors. ... The first tram of the morning will get you into the City just prior to 8.00am." However race participants did receive a glossy booklet on how to use the nearby West Gate Freeway.

And Also ...

"Geelong [AFL] supporters have strong passions for Motor Sports (65% more than the average Australian)... Conversely, St. Kilda supporters are 54% less likely to participate in Motor Sports than the average Australian."

Ref: Roy Morgan Research Media Release, 25/9/09

Drive-to-Work Day

"Sunday is designed for sleeping in, waking to a humungous fry-up breakfast, turning on the reticulation for the garden and planning a drive with a lunch stop. Which I did. Except that on that day, some charity closed off the freeway so that 7000-odd bicyclists could pedal down the four-lanes and give money to sick people. One month before there was a similar event that saw almost 10,000 people walk a 10km route around the river. It was full of bicycles, roller blades, prams, wheelchairs and dogs and completely clogged up a perfectly good family day by the water. Earlier on the year there was a walk-to-work day. Give us a break. I live 17km away. All the people who involve themselves in these activities feel sickeningly happy that they've done something to better the world. ..."

"At least, all this is the impression I get from whinging motorists. These same whinging motorists are the ones who intensely dislike cyclists on the roads AT ANY TIME. They don't like pedestrians because they can press a button and make them stop at a traffic-lit intersection. So, I am declaring that I will support a drive-to-work day. That's right: Everyone will drive to work. No cycling, no walking, no buses, no scooters, no taxis and no trains. Just jump in your car and bugger the lycra-clad oxygen thieves because the car is king. Because roads are made for cars. Not bicycles. Because car parks are there for cars and should be used as such. Wouldn't you be a happy lot then. It will show solidarity. The car wins over the bicycle. There could even be a charity to donate to. Just imagine that? A city with the population of four million and a car ownership of two million. ... And while your in the world's biggest traffic jam since Karl Benz self-propelled himself out of his driveway, just take a few seconds to reflect on a commuting life alongside bicyclists, scooters and pedestrians."

Ref: Neil Dowling, The Age, 10/12/08

"April 1st is Drive-to-Work Day, an event created to raise awareness of car driving among pedestrians, cyclists and transit riders. The Seattle Transit Blog is joining with other local groups and a world-wide-movement to promote Drive to Work Day in order to increase gas tax revenues for the Washington State Department of Transportation so that new roads projects can be started in our area. Our state transportation budget is severely in the red and more driving is the only means to more revenue for our state. Each day millions of car drivers are put in danger, forced to drive more quickly in less

traffic or otherwise inconvenienced by those on foot, on the bus or on bike. The millions of Americans who take transit, ride their bike or walk to work each day are not taking part in the American Dream of driving a single-occupancy-vehicle to work, and are causing millions of acres of land in United States to go unpaved every year. Do your part and make roads safe for single-occupancy vehicles: Drive to Work Today!"

Ref: Andrew Smith, Seattle Transit Blog, 1/12/09

High Tech Solar Bus

"Sinautec Automobile Technologies, LLC and the American University (AU) will showcase America's first ultracapacitor electric vehicle ... on October 21, 2009 ... in Washington, DC. Sinautec will display and demonstrate an eleven-seat minibus, powered by state-of-the-art ultracapacitors, and charged by a 5,000 watt mobile solar unit. Ultracapacitor vehicles consume no fossil fuels, produce no tailpipe emissions, and are cost competitive compared to similar buses running on conventional fuels. ... Unlike battery-powered vehicles, ultracapacitor vehicles can be charged within minutes, and have important applications in municipal and campus transportation, shuttle services, tourism and recreation. ... Sinautec is an Arlington, Virginia-based company that develops high energy density ultracapacitors in the transportation and utility energy storage markets."

Ref: The Green Razor 102, 29/9/09



11 Seat Ultracapacitor Mini Bus

"Energy security and climate change are two urgent issues facing America today. American municipal buses consumed an estimated 6 billion gallons of diesel fuel last year, equivalent to 2% of overall US oil consumption. Diesel buses emit over 50 million tons of CO2 each year in tailpipe pollution, contributing to man made global warming. ... Compared to diesel or CNG buses, Sinautec's ultracapacitor buses have low maintenance cost, low operation cost, zero tailpipe emission, and can reach a zero carbon footprint if powered by renewable energy sources. Two of our commercial bus lines are already in operation serving the Greater Shanghai area since 2006. Three more ultracapacitor bus lines are scheduled to start operation in China in 2009."

Ref: Sinautec Website www.sinautecus.com

Methanol

"If as a thought experiment, we decided [in Australia] to run our diesel infrastructure on methanol by 2019, what would be the result?"

1. About 300,000 engines would have to be re-manufactured each year, fully employing the ailing automotive parts industry.
2. We are re-using existing engines, where suitable, capturing the value added in manufacture.
3. We are replacing many billion dollars of imported fuel with a local product.
4. Pressure on the health budget would ease as the health cost associated with diesel emissions disappears. The EPA estimates this to be \$9,000 per vehicle per year for Euro 4 compliant vehicles, and almost \$30,000 for Euro 1 vehicles. This does not include the PM2.5 particles that are currently unregulated, but are estimated to double costs. It also assumes the exhaust catalysts and filters are in working order.
5. Transport oil spills would no longer be serious. Methanol is water soluble, and degrades very quickly under microbial attack.

"Barney Foran and Chris Mardon produced one of the many models of a methanol economy as part of a CSIRO Resource Features program and concluded the following:

6. About 30 million Ha (or 4% of Australia's landmass) of non-productive agricultural land can be sustainably planted with suitable wood crops. This would nearly double the size of the agricultural sector.
7. About 150 regional methanol refineries would be built, bringing much-needed employment to regional areas.
8. Urban sewage would be collected and refined to methanol.
9. And the CO₂ from this fuel would become negative, as a solid carbon char is a by-product of methanol refining.

"As we move through peak oil, the change to renewable fuels is inevitable, as oil becomes more expensive, and more energy is required to refine and deliver it to the market. The technology to make an early transition exists now. Our engines are working as we speak. The difficulty is not the technology, but the artificial barriers erected around existing mainstream products, and the policies that on one hand claim to want a greener outcome, but on the other actually protect and encourage the status quo. The bureaucracy will always say, 'We will not pick winners', and 'Let the market decide'. This is fine if the market is fair, but the market is far from fair. Subsidies to multinational companies, and to

the users of their products, ensure that anything that is not mainstream seems expensive.

"When I pointed out the government's own figures for the health cost of diesel vehicles in an urban area was over \$300-million a year, a senior official commented, 'I know, but you will not get anywhere with that argument, because we meet national air quality standards'. If these attitudes are not reversed, and sustainability is not encouraged to flourish, then we are facing a very bleak future, as we run out of resources at an exponential rate. The country has to pick winners, and nurture them. It is now obvious that new farm grown fuel industries must be of the highest priority to ensure our prosperity into the future."

Ref: Marcus Clayton, ABC Radio National – Ockham's Razor: Zen, the Science of Clean Engines and Bureaucracy, 26/7/09 Full transcript: <http://www.abc.net.au/rn/ockhamsrazor/stories/2009/2634392.htm#transcript>

Permeable Car Parks

"Manningham [Council in the north-east of Melbourne] chose a permeable car park retrofit design which includes a rain-garden. Car parks are a part of all Local Governments, including recreation grounds, community centres, civic centres to name a few. Manningham alone has over 36 sites where car parks have the potential to process stormwater and reduce potable water use. The permeable car park upgrade of Domeney Reserve in Park Orchards challenges the traditional view of a car park as a single use resource. The car park has been remodelled as a multi-purpose space including water collection and reclamation. A component of the design seeks to incorporate public education, and seeks to challenge attitudes to land use. Consequently Manningham has embedded the stormwater harvesting approach as an opportunity in a broad sports-recreation strategy and specific master-planning for several sports ground sites within the municipality. Manningham will also incorporate this concept in the major Doncaster Hill Civic Precinct development."

Ref: Centre for Design@RMIT News, August 09

On Adelaide

"What are the great features of Adelaide as a city? Its topography - except that traffic engineers have conspired to ruin its easy cycling and walkable terrain. Its climate - except that no real advantage had been taken of it until chairs and tables spilled into the streets, only to find that the streets had been treated as 'traffic sewers' rather than places for people."

Ref: Paul Downton, Adelaide Now, 10/8/09

The Unexpected Consequences of Investing in Public Transport (Part 1)

"The [Victorian] regional 'fast' rail project has been extensively discussed; some see it as a waste, others as a strategic long term investment. The general view in the regions is that it has substantially repositioned a number of regional centres and their corridors. In terms of access to Melbourne and overall liveability it has provided genuine transport mode choice in an era of rising oil costs. Looking at it from the metropolitan area perspective it looks like it is all about people commuting to Melbourne to work. The addition of extra carriages on many trains in the morning to relieve overcrowding is quickly seeing those carriages filling. There seems to be a universal rule for public transport and for roads, provide extra capacity in the system and the demand simply fills the available space.

"While commuting to Melbourne is the dominant use in morning and night that doesn't explain the very substantial patronage during the day and weekends nor the people travelling away from Melbourne in the morning. Yes people are commuting in the morning to the regional centres from Melbourne and from towns on the corridor and between towns in the corridor. In the case of Bendigo, with which I am most familiar, there is an overcrowded early morning train arriving every morning with workers and students, some of them having travelled all the way from Melbourne. For example, La Trobe University has introduced new dentistry course at its Bendigo campus, many of those students are either travelling daily or are coming from Melbourne and staying in Bendigo for part of the week.

"However, what this article is really referring to is how the provision of extra services (there are now 17 services a day between Melbourne and Bendigo), the rejuvenation of rail and the change in people's attitudes is now impacting on the way that Bendigo is starting to think about its own transport future. The penny finally dropped with VLine that as well as the main railway station at Bendigo there were two other stations in the Bendigo urban area, Eaglehawk and the rather delightfully named Kangaroo Flat. All trains now stop at Kangaroo Flat and four now either emanate from Eaglehawk or stop at Eaglehawk on their way through from Swan Hill. With effectively now a 'local' service operating within urban Bendigo some people are now using this as an interurban service. Passengers, generally the young and the old, are now regularly seen using trains within the Bendigo urban area. Despite of course the fact that there are buses

and that the bus system has been substantially upgraded. Despite the fact that these two suburban stations, particularly Kangaroo Flat, have very few houses around them and both are about 300 metres from the nearest town centre.

"These emerging patterns of usage combined with some other trends and forces are now raising the very real prospect of using the existing railway line as the spine of a local light rail system. Not only is there the line I have referred there is a line to the north of Bendigo which traverses the suburbs of White Hills Epsom, Ascot and Huntly on its way to Echuca. Currently Council is working with consultants PB to develop a structure plan for Huntly, an old town which has become a satellite centre about 13 km north of the city centre, but it has the Bendigo to Echuca line skirting its eastern edge. That line is already using the fast rail trains to provided a service between Bendigo and Echuca on a daily basis that allows people to commute to Bendigo. The local community consultation for the Huntly Structure Plan has raised the concept of the town having its own rail station. Could this be the forerunner of a whole series of proposals? With the prospect of reopening the disused Golden Square station and the Marong station some 15 km west of Bendigo, where the Council's long term strategy nominates this area for future residential development and an area to the north as an employment node."
{To be continued in #127}

Ref: Trevor Budge, Planning News, Oct 2008

And Also ...

"There is a reluctant hero lurking somewhere in the suburb of Beecroft, in Sydney's north-west. Fed up with hundreds of cars surging through tiny Albert Road each morning peak hour on a rat run to avoid clogged Beecroft Road, [an] unknown person took matters into their own hands. ... [A] sign, stating 'no left turn' permitted between the hours of 7.30am and 9.30am, had been expertly nailed into a power pole on the corner of Beecroft and Albert roads. It turns out the sign was a fake ... But residents and parents of nearby Arden Anglican School, who have campaigned for a decade to install such a sign, thought their prayers had been answered. ... Despite the appeals from residents and the school, the council's traffic management committee had never formally considered the request and the council had never asked the RTA to do something about the corner."

Ref: Georgina Robertson, SMH, 27/8/09

Picture: Google Maps, SMH

