

Fly By Rail

"Imagine training it in comfort from Melbourne to Sydney in just 3 hours. 'A zero emissions fast train network serving Australia is visionary and nation building. It will stimulate our domestic construction sector, providing thousands of jobs, whilst being a serious step to avoiding the looming oil and climate crises', said Matthew Wright, Campaign Director of Beyond Zero Emissions. 'Australia is lagging behind Europe, Japan, China and emerging economies by failing to plan and build a high speed rail network connecting all the mainland capitals. Across Europe, air travel is fast being replaced by high speed rail. France has an extensive rail network and Spain's fast train network has grown to 2,000 kms of track over the last decade, with the government building 10,000 kms of high-speed railway track by 2020. 90% of the Spanish population will be within 50kms from a bullet train station', Matthew said.



'They always assume that one actually wants to go to Sydney.'

"Spain's first high-speed 360km train route between Madrid and Seville opened in 1992 with 5 million passengers taking advantage of the highly time efficient train travel in its first year, avoiding airline queues, frustrating check-ins and cramped conditions.

"Australia can't afford to be importing \$65 billion of oil each year by 2015. This is the equivalent of foreign oil companies taxing all Australians \$3000 each. We need to keep \$65 billion dollars a year in Australia, directing it towards schools, hospitals and a transition to electrified rail powered by 100% renewable energy. The Federal government is exposing Australians to fluctuating oil prices and dangerous global warming by not addressing the looming oil crisis with electrification of transport including a Fly By Rail option between Perth, Adelaide, Melbourne, Canberra, Sydney and Brisbane. If only the Australian federal and state governments could see the immense value of a fast and efficient train system. This would answer the Australian public's calls for leadership on the climate crisis, Matthew said.

"The Melbourne to Sydney air route is the world's fourth busiest in the world. A high-speed train carries eight times as many passengers as an aeroplane over a given distance, using the same amount of energy. And with our vast open spaces and flat land, the cost of building infrastructure for such a system is economically favourable compared to European countries. 'The trains can be powered through electrified rails, offering zero emissions transport when combined with 100% renewable energy built into the existing electricity grid'." **Ref: Beyond Zero Emissions, Media Release, 26/8/09**

Regional Rail in New South Wales

"NSW Shires of Blayney, Cowra, Weddin, Young and Harden all consider that the use of rail for transport of bulk goods is superior to road use. The five local councils who have joined forces in an attempt to establish the viability of their common rail line, have finally been given access to Rail Infrastructure Corporation (RIC) and have decided to go ahead with their study for which a preliminary report was completed in June. ... The five councils and their unified approach are gaining strong support from their communities, none of which want to see increased heavy vehicle traffic through their townships on economic, environmental and social grounds ..."

Ref: On Track, Vol 3, No 3, Sept 09

"Humphrey: The local councils aren't happy.

Jim: Local councils are never happy.

H: They're coming to see you.

Jim: How many?

H: Five of them.

Jim: That many – why?

H: They've formed a consortium – an alliance – to progress rail – their railways – this one!

Jim: Did we know?

H: Oh yes indeed.

Jim: How do they want to progress rail then?

H: They want to take the lines over.

Jim: Do they? What a good idea!

H: I'm not so sure.

Jim: Why ever not? Local enthusiasm, business involvement, productivity, trains even?

H: All of that.

Jim: Well where's the problem?

H: They'd probably make a show of it – contain costs – be efficient ...

Jim: I see – show how it can be done, eh!

H: Probably

Jim: Set a precedent?

H: Yes Minister!

Jim: Difficult!

H: Yes Minister!"

(Adapted from the BBC series Yes Minister)

Ref: On Track, Vol 3, No 3, Sept 09

Rail in Melbourne

*'Public transport is the life-blood of a City'.
"So said Melbourne's major public transport operators, the Victorian Railways [VR] and the Melbourne & Metropolitan Tramways Board [MMTB], in the 1950s and 1960s. They were absolutely right. Public transport is an essential service, a utility as essential as our electricity, gas and water supplies. No major metropolis can operate cohesively, economically, effectively and efficiently unless it is compactly laid out so that its transport infrastructure, a necessary but unproductive industry, operates efficiently with transport journey distances minimized.*

"Cohesive and efficient operation of a city's business and transport within the metropolis requires an overall average gross population density of at least 50 to 100 persons per hectare. This was said for Melbourne as early as the 1929 Metropolitan Town Planning Commission Report. Cities which possess a comprehensive public transport system and in which the major movement of its people is by public transport, contribute greatly to this cohesiveness, and work significantly more economically and efficiently than cities which are sprawled and where person travel is car-dominated.

"Today, the metropolis of Melbourne operates inefficiently. It is a severely sprawled city, a victim of the 90-year old fundamental contradiction between what makes a city compact or sprawled. Its overall average gross population density of the 18 municipalities within 20 km of the city centre is only 20 persons per hectare. The state government's recent report on Transport Congestion stated that, because of its current transport congestion (mainly from road traffic), the overall cost to the metropolis, and its people, is of the order of \$4 billion annually. This is money completely wasted. We in Melbourne can no longer afford to pay for the inefficiencies of the present high levels of private car use. Our limited available capital funds are much more effectively spent on public transport extensions, improvements and refurbishments.

"A major contributor to Melbourne's transport congestion and inefficiency is its lack of a comprehensive and co-ordinated public transport system, and especially of the system of trunk routes as provided by the suburban railways. This system provides the fast travel, at schedule speeds of 40 km/h or more, for those making journeys longer than around 5 km. The necessary and complementary local-feeder tram and bus routes provide convenient transport at

schedule speeds of 20 to 25 km/h for those making short journeys and those not close to a trunk route station. Together they provide a very viable alternative to private car travel. At present, Melbourne's trunk [suburban electric railway] system serves only 25 to 30% of its urban area."

Ref: Louis Fouvy, Rail Horizons, September 09

See the full article at:

<http://rtsa.com.au/assets/2009/09/rh-sep-09.pdf>

Making Transport Attractive (Part 5)

"Interoperability between heavy and light rail is the most important passenger rail interface from the viewpoint of attractiveness, because the vehicle moves from one track to another instead of the passenger changing trains. This requires track sharing between high and low-speed trains and between heavy and light-rail rolling stock. Sharing the same electrified tracks has benefited all modes involved in the Karlsruhe urban and suburban Tram Train network, which started in 1995, 3 years after Manchester. The suburban tram operator succeeded in convincing Deutsche Bahn AG (DB AG) to allow heavy and light-rail rolling stock to use the same tracks. As a result, the same light-rail stock is running alternately on central city streets and traditional railway track. For passengers, remaining on the same train for the entire trip removes all negative perceptions of changing mode and waiting.

"Copying the examples of Manchester and Karlsruhe in other cities could create a promising niche for public transport. However, it requires bridging the cultures between traditional railway operating staff and urban rail operators. It would mean putting more emphasis on active safety (avoiding collisions) than on passive safety (collision resistance) and adapting safety standards accordingly. Some engineers have suggested a compromise standard of 600-kN compression resistance. The Karlsruhe experience presents a realistic case for encouraging the establishment of a body in charge of both tracks and operations to open up infrastructure to third parties while ensuring safety. In Karlsruhe, this happened by persuasion; in Japan it happened by regulation.

"Opening track to third parties should not be confused with total separation of infrastructure and operations. A useful comparison can be made between the reportedly successful privatization and division of Japanese National Railways into the regional JR companies and the somewhat less-successful British Rail privatization with a split into a monopoly track owner (Railtrack) and various franchised operators.

"The regulatory obligation for the main operator to accept third parties on its track is compatible with service development and new investments in track. By contrast, the experience of Railtrack in the UK confirms the fears that a monopoly track owner has every interest in creating scarcity in order to maximize position. If track-only monopolies were common in Europe, we might wonder who would have a market led interest in developing new rail links!

{Continued in #130}

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

Rail in New Zealand (Part 2)

"The period of private ownership of the rail system from 1993 might have resulted in some improvements and nominal operating profits. But it was clearly a financial and economic disaster because any such profits came at the expense of a lack of investment in maintaining & improving the infrastructure and equipment. All of the benefits of this 'improvement' were plainly converted to the private benefit of the shareholders, such that at one point the total Stock Market capitalisation of Tranz Rail was of the order of a paltry \$200 million. If the network is deliberately run down the only obvious consequence is an inability to generate sufficient traffic and revenue. To argue that the run-down was the result of an inability to generate revenue is perverse. ...

"[In the Treasury discussion] document it is stated that there is little current evidence to support the premise that rail offers positive externalities (such as reduced congestion, emissions, and accidents) and that road transport does not pay for its full social costs, reducing the ability of rail to compete. Such evidence existed as recently as 2005 in the Ministry of Transport's Surface Transport Costs and Charges paper. That paper was based on 2001-02 figures, but showed that trucks cover no more than 56% of their total costs. The situation might or might not have changed since then, but to contend that the premise is now false because of a lack of evidence is surely unsupportable. Indeed, paragraph 45 of the document questions the soundness of Road User Charges and Fuel Excise Duty in charging road users for the full costs they generate. It is time that the Ministry of Transport produced an updated report on the allocation of Surface Transport Costs & Charges. All costs in maintaining rail infrastructure are borne by KiwiRail. Costs of maintaining the road network are borne by both private & commercial motorists, & district and city council ratepayers,

with an ongoing argument as to whether commercial users pay their fair share of such costs. By increasing rail utilisation and hence operating revenue, fixed costs become a lesser percentage of total costs which in turn could lead to a decrease in the subsidy paid to KiwiRail.

"The statement that 'much of the rail network is uneconomic, even when taking into account the environmental value of rail's greater fuel efficiency', together with the succeeding references to rail's social and environmental contribution seems to be little more than a half-argued assertion. How, exactly, was this 'uneconomic' position arrived at? What values have been placed on the greater fuel efficiency and the social and environmental contribution and how were they calculated? Again, the statement that 'it is also possible that road freight prices are on average close to the economically correct level [whatever that is] across the country' surely cannot be supported solely on the grounds of an apparent absence of contrary evidence. What evidence has been looked for, and does any available evidence actually support or contradict such a 'possibility'.

"The final sentence is confusing, to say the least. What is the connection between 'road prices and optimal prices' on the one hand and 'rail funding' on the other? And if the 'further work being undertaken' is a reference to the Ministry of Transport's research on Understanding Transport Costs and Charges which is due for completion by the end of 2010, is it not at best premature to be considering decisions on long-term transport infrastructure before the results of that research are available?" {Continued in #130}

Ref: Submission to the National Infrastructure Unit of the Treasury, New Zealand Railway and Locomotive Society Inc, 1/10/09

US Promotes Plug-Ins

"Budding US hybrid car maker Fisker Automotive will reopen a shuttered General Motors plant in Delaware to build fuel-efficient, plug-in cars, the White House has announced. US Vice President Joe Biden said the re-opening of the plant was part of the Obama administration's determination to jumpstarting the production of fuel-efficient vehicles in the world's largest economy. ... Fisker's first car - the Karma - is expected to go on sale in mid-2010 at retailers in the US and Europe. The company said its plug-in hybrid cars will help remove the country's dependence on foreign energy by eliminating the need for 42 million barrels of oil by 2016 and will offset 8.0 million tonnes of carbon dioxide emissions." Ref: Reuters/Tim Shafer, West Australian, 28/11/09

Transport & Land Use Planning

Canadian economist Todd Litman, founder of the Victoria Transport Policy Institute (VTPI) in Victoria, British Columbia, Canada, has provided passionate examples of the role of planners and transport professionals in creating societal change. *“His observations include:*

- *Land use is crucial to transport outcomes. The establishment of new suburbs in outer metropolitan areas contributes to dependence on cars for personal mobility, with flow-on effects to accident rates and health outcomes. Moreover, residents' overall housing and transport affordability is likely to be impaired, as the costs of owning and operating cars are substantial. People often attach 'prestige' to car ownership, so changing car ownership rates is not easy.*
- *Transport and town planners have important influences on future travel behaviour. The walkability of many long-established urban areas is a valuable asset, as it facilitates good health for those who walk, community networks and safer and more attractive neighbourhoods. A multi-modal approach to transport and land-use planning is vital.*
- *Cities should build more medium-rise housing near train and other public transport routes, to increase the availability of public transport as a practical option. Mixed-use developments can reduce the need for travel, because the built environment better caters for the residents' work, retail, educational, and cultural needs.*
- *Safe, comfortable, and frequent public transport services encourage usage, and actual travel time may not be as crucial as sometimes thought. Good 'real time' arrival and departure information at stations, bus and tram stops is important.*
- *The cost of car parking is often not considered in transport proposals, and yet it is expensive both in construction costs and the amount of land it absorbs. Some North American inner city residential developments have deliberately incorporated only limited car parking, with the effect of encouraging the use of public transport, cycling, and walking.*
- *Small innovations can play a major role in improving transport outcomes. For example, the introduction of wheeled luggage about a decade ago has made it possible for more people to consider walking as part of their daily commuting effort. In surveys, the share of overall travel time that is comprised of walking is often underestimated.”*

Ref: Todd Litman, Transport Research & Policy Analysis Bulletin, DOT, Victoria, Australia <http://www.transport.vic.gov.au>

Working with Nature: Algae

“LiveFuels, a developer of renewable algae-based biofuels, has begun pilot operations at its 45-acre test facility in Brownsville, Texas. Consisting of open saltwater ponds, the facility will be used for research on optimizing algal productivity and increasing the rates of conversion of biomass into renewable oils. ‘Our new Brownsville facility allows us to explore a system-level solution for producing algal biofuels’, says Lissa Morgenthaler-Jones, chief executive of LiveFuels. ‘By harnessing the power of natural systems, we hope to achieve what has eluded the biofuels community for decades – cost effectiveness, scalability, and sustainability’, she adds.

“While many algae-to-biofuels companies grow monocultures of algae - sometimes genetically modified strains - within expensive enclosures, LiveFuels grows a robust mix of native algae species in low-cost, open-water systems. To harvest the algae, LiveFuels uses a proprietary mixture of oil-rich ‘algae grazers’, such as filter-feeding fish species and a variety of other aquatic herbivores, in place of expensive and energy-intensive mechanical equipment. These species can easily be processed into renewable oils and many other valuable co-products. ‘Current approaches to generating algal-biofuels are resource intensive and face fundamental science and engineering hurdles’, says David Kingsbury, chairman of the LiveFuels scientific advisory board. He argues that LiveFuels’ approach is ingenious in its simplicity. ‘By turning natural food chains into productive systems, LiveFuels eliminates many of the costs and risks plaguing other approaches to using algae for biofuels’.



“To date, LiveFuels has filed ten US patents for its proprietary approach to growing and harvesting algal biomass. At the Brownsville facility, LiveFuels will conduct research on optimizing the productivity of natural aquatic ecosystems through biological and environmental conditions. The results will be used for an expansion to full-scale commercial operations along the coast of Louisiana. The commercial facilities will be designed to harness flows of agricultural pollution from the Mississippi River that can be used as nutrients for generating algal blooms. By removing these nutrients from river flows, LiveFuels’ systems also mitigate the impacts of agricultural pollution in the ... ocean.”

Ref: Richard Kessler, Recharge, 18/8/09

Tram Building in Victoria (Part 2)

"Industry policy is nearly always controversial. The Brumby Government has shied away from broad price preferences policies, such as Labor in NSW has introduced. This has given preference to local producers - even if their bids were 20% more expensive than international competitors. Free-market advocates say that this kind of policy distorts investments, props up failing industries and wastes public money.

"Richard Allsop, a researcher at the Institute of Public Affairs and a senior transport bureaucrat in the Kennett government, says the only considerations in buying new trams for Melbourne should be price and quality. 'Where they are built shouldn't come into it', he says. Forcing the trams to be built locally would 'take us back to being the inefficient, protectionist economy that we were in the 1980s'. But [Australian Industry Group Victorian Director, Tim] Piper says the manufacturing industry in Victoria is not looking for protection - companies just want the Brumby Government to consider the benefits from manufacturing here. These include boosting payroll tax from more people employed, higher company tax paid and higher income tax. It will also see the retention of skills in the industry.

"[The state secretary of the Australian Workers Union, Cesar] Melhem says it is time the Brumby Government 'put up or shut up' about supporting local manufacturing, and believes the awarding of the contract will be a litmus test. Melhem, a powerful figure within Brumby's right-wing faction, says there will be a 'phenomenal' reaction against it if the tram contract is sent offshore, as was the building of 18 new trains for Melbourne. Those trains, the first of which is now being tested in Melbourne, were manufactured in Poland and Italy. If the same happens to the trams, says Melhem, 'I'm not going to be quiet about it. I'm going to go nuts'. Industry policy in Victoria, says Melhem, is too geared towards grants and assistance. In the past year the Rudd Government has committed billions to pump-prime the economy by pledging to build new roads, rail and schools - and the State Government has gratefully put its hand up for a share of that money. But, says Melhem, the best tonic is giving local manufacturers orders to make things.

"Six companies are believed to have put in expressions of interest to build the new trams, which will cost around \$5 million each to build. One tram driver, who asked not to be named, said the locally made trams were getting very old

and dated, but their specific design for Melbourne conditions had meant they were a better product. The imported trams were, he said, designed to be run on light rail systems, not stuck in traffic as is often the case in Melbourne. 'Every tram up until (1994) was built specifically for Melbourne, and (the low-floor trams operating here) were off-the-shelf designs from a European manufacturer'. The imported trams drive well in 'off-street' running. 'But they do not handle traffic and slow speeds at all well; they don't crawl well'.

"Yarra Trams outgoing chief executive Dennis Cliche says new trams for Melbourne can't come soon enough. Of Melbourne's 495 trams, only 100 are modern, low-floor trams that can be used by people with disabilities, and have air conditioning. The rest are older than 1994, and in varying condition. Cliche believes it essential, if the city's public transport system is to be one Melburnians can be proud of, that rail manufacturing is a viable industry in Australia: 'And to do that you need an ongoing flow of work. You set up, you gear up and then the manufacturer has an ongoing flow to recover the investment'. European governments understand this, he says, and huge orders for new rolling stock are what has enabled European manufacturers to set up huge workshops to build new trains and trams quickly - and at low prices. 'At the Alstom factory in La Rochelle in France, they are making 12 to 15 new trams a month. If the order was big enough, we could be doing that here', Cliche says.

"While the French are building 15 a month, the Victorian Government is talking about building 50 trams at a very slow rate of just 10 a year. 'They [the French] could do our order in three months if we wanted it. That is the dilemma. If you are doing 10 a year, it's hardly worth even considering [establishing a manufacturing centre in Melbourne or Australia]', says Cliche. 'No manufacturer is going to spend \$30 million to set up a factory if it'll be idle after two years'.



"Cesar Melhem agrees that the size of the order is also crucial, because 50 trams may not be enough to allow locally based manufacturers to make long-term plans. But if the trams are not built here, Melhem believes, Victoria could see the demise of all transport manufacturing, including the car industry. 'If we lose the economies of scale, work will continue to go offshore; we need to give them volume'." **Ref: Clay Lucas & Ben Schneiders. The Age. 15/10/09**

Photo: Tram in Bordeaux,
Picture: Thomas Alan, LTRA, July 2006

Lund: City of Transit Ideas (Part 3)

“So, how did Lund [in Sweden] make it happen? What are the lessons that can be learnt for other city officials who share the same vision? First and foremost, Lund realised from early on the importance of transportation policy as a means to improve quality of life. The politicians were thoroughly educated on the transportation issues as part of the Agenda 21 project. A valuable role in this process was played by the consultancy company Trivector, which insistently tried to communicate to politicians the benefits arising from a shift to sustainable transportation. The politicians soon started to co-operate with inspired and able civil servants from many different departments of the municipality to make change happen. Cooperation into a common vision is a key word here; without it, much less would have been realised.

“The basis of the entire campaign was a massive outreach to the public, which was supplemented by extensive dialogue and ensured that people would support policy changes. A people who are culturally educated to realise the importance the environment plays in their lives and who essentially form the backbone of the process: the municipality had in its hands a fertile soil to sow its innovative ideas. While this certainly does not mean that the process cannot be repeated elsewhere, it indicates that perhaps some radical cultural changes need to occur, if the success of Lund is to be replicated.

“Lund has more strategic advantages: it is mostly flat and the students who comprise one third of its population are more inclined to cycle. There is still lots to be done; for instance, bicycle theft is widespread and remains a big problem. But overall the city’s initiatives have made Lund the only municipality in Sweden where car usage shows no increase – perhaps this is one of the main reasons it was voted the municipality with the best quality of life in the country.

“The Swedes are inclined to feel proud about their achievements – and who can blame them! They also feel very keen to share them with others. That is why officials from Lund have engaged in a series of seminars over the years informing officials from other European cities on the benefits of transportation systems relying on mass transit, cycling and walking. Now, what is left is for inspired individuals in key positions to follow along and induce a shift that can only make their citizens healthier, friendlier, happier.”

Ref: Theo Haris, Carbusters 35, 2008

www.carbusters.org/magazine/index.php?issue=35&go=feature4



Stadshallen (The City Hall), Lund, Sweden

And Also ... (Aussies in Sweden)

“You know that you have been in Sweden too long when: You’re not surprised anymore when hearing about an old petrol station being turned into a mosque.” Ref: <http://www.coolabah.com/sweden/youknow.html>

Suburban Sprawl in Europe (Part 1)

“In the last few decades, urban sprawl, once regarded as largely a US phenomenon, has spread across Europe. Improved transport links – highways designed to accommodate increased freight traffic – have led to American-style intercity corridors built up with new industrial and commercial developments. Auto-centric suburbs with low-density housing tracts and shopping malls have followed, and public transit has not been able to keep pace. Now an emerging group of planners are promoting a new kind of development – mixed-use, low-carbon communities which are pedestrian-friendly and mass-transit-oriented.

“A nearly iconic fact of life in the US, urban sprawl had been slow to evolve in Europe. Cities from Luxembourg to Prague, from Madrid to Istanbul, are experiencing accelerating sprawl and its increased automobile traffic, carbon dioxide (CO2) emissions, energy consumption, land fragmentation, natural resource degradation, watershed damage, farmland decline, and social polarisation – has become a major concern across the continent. Over the last 20 years, the number of kilometres travelled in urban areas will increase 40%, an increase that will negate any expected gains in fuel efficiency, and make reaching Europe’s Kyoto goals of reducing CO2 emissions nearly impossible. In the newest EU countries, those in Eastern Europe that had been communist, the changes have been even drastic. Central planning demanded high-density housing and public transit. With its entry into the EU in 2007, Romania’s economy grew 5.7%, and the year after, 7.5%. This economic development drove residential construction up 29.3% in 2007, and along with it, the number of cars – up 27%.”

Ref: Bruce Stutz, Carbusters 38, 2009

www.carbusters.org/magazine/index.php?issue=38&go=feature3