Light Tram (Ultra-Light Rail)

Further to our report in #21, the UK Parry People Movers (PPM) ultra-light rail technology has been selected for permanent operation on a branch of the UK national rail network. Two new PPM-60s will be built to cover the operation, replacing the heavy diesel trains that currently provide the service. With over 4,000 trips operated in a trial passenger service, reliability and punctuality stood at 99%. Compared to the regular diesel train, operating costs were 45% lower and carbon dioxide emissions cut by 80%.

Parry's chairman, John Parry, said: *"This will bring clean, green and quiet transport to the national rail industry. Experimental operation last year proved that our technology is right for passengers - they told us it was as quiet and attractive as electric light rail systems."*

PPM was founded in 1992 to develop rail transport based on a new innovation: the 'kinergetic' flywheel energy store, which allows vehicles to run extremely efficiently and to recapture their braking energy for reuse when accelerating, giving excellent environmental performance and energy efficiency at lower cost than conventional technology. The same technology can be used on railways or urban tramways. The vehicles are fully compliant with accessibility regulations.

The PPM in High Floor Configuration

The PPM-60 is a flexible small-capacity rail vehicle for routes where passenger flows are relatively low but a high quality travel experience is desired. It is available in high floor configuration suitable for level access from standard height railway platforms, or low floor configuration suited to tramway use. Both the external appearance and internal layout can be designed as required. Traction power is derived from a small automotive internal combustion engine for longer routes or from intermittent electric supply, requiring contact with power source at stopping points only (where stops are close together and zero emission operation is required).

Oil and War

"John Howard's acknowledgement of the war in Iraq being about oil dependence is remarkable in its intended lack of irony. As the Iraq war spirals into a continuing toll of death, torture and destruction, the Prime Minister is now justifying it with energy consumption in the age of global warming…But as the bodies of Iraqi people are buried and mourned, Howard also digs another messy pit of oil dependence and environmental destruction almost impossible for future generations to climb out of."

Ref: Gabrielle Alexander, *The Age*, 6/7/06

"How contradictory, ensuring "energy security" by fighting a war, while doing very little on the home front to develop viable and acceptable alternatives that make use of our natural advantages."

Ref: Paul Bartels, *The Age*, 6/7/06

Sustainable City in a Sea of Oil

"A city free of cars, pedestrian-friendly, powered by renewable energy and surrounded by wind and photovoltaic farms -- all in the middle of a petroleum-rich desert…envisaged for Abu Dhabi, the capital of the United Arab Emirates (UAE). When complete, in 2009, it will be the nearest thing yet to a zero-carbon, zero-waste city. Using the traditional planning principles of a walled city, together with existing technologies to achieve sustainable development, this six sq km expanse [called the Masdar Initiative] will house an energy, science and technology community…. To encourage people to be a part of this setup amid harsh weather conditions that witness temperatures soaring up to nearly 50 degrees Celsius during July and August, a pedestrian-friendly environment has been planned with narrow streets and shaded walkways. The maximum distance to the nearest transport link and amenities is likely to be no more than 200 m and will be complemented by a rapid personal transport system…. By attempting the first carbon neutral city in the world, Masdar is demonstrating its commitment to change the way the world understands energy and sustainable resource utilisation. One day all cities will be built like this…"

Ref: Planet 2025 News Network 19/6/07
www.planet2025news.net/ntext.rxml?id=4573&photo=

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Solar Sound Barrier

"Solar panels on noise barriers along a stretch of Melbourne's Tullamarine Freeway will power street lights nearby in an Australian-first project, the Victorian government says. The panels provide noise screening for the Tullamarine Calder interchange, opened earlier this year. Roads Minister Tim Pallas said 210 solar panels fitted along 500 metres of the barriers would begin feeding electricity into the local grid within weeks, once wiring was completed. The panels will generate enough electricity to power three small homes and will generate up to 10 per cent of the electricity required to illuminate the lights, Mr Pallas said." **Ref: The Age 17/6/07**

This is actually a Going Solar project under contract to the Tullamarine-Calder Interchange Alliance. One of the issues related to motor vehicle-based transport is noise generation requiring the construction of sound barriers. Considerable embodied energy is involved in the use of concrete sound walls while a significant portion of the cost of PV panels can be apportioned to the mounting structure. It is therefore syngenetic to mount the PV panels on top of a concrete barrier to give the required height for sound reduction and as a by-product produce electricity. A case study is available at www.goingsolar.com.au (see Case Studies).

PV panels being installed above the concrete

Ferry Feedback

"Frankston is in the process of developing a vision for Frankston 2025, (the draft document that has just closed for comment) … the ferry concept popped up several times, so there must be some community interest in this initiative as it is a community driven document. You may be riding the right wave, just a bit slowly at the moment." **Confidential Feedback 2/7/07**

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Transport in Sri Lanka

Sri Lanka has approximately the population of Australia in the space of Tasmania. Sri Lankan traffic can best be described as chaotic. Rules as we know them don't seem to apply but for the moment the system works - in its own manner. Many of the main roads, even in Colombo, are one lane each way without a footpath in the conventional sense. The space is typically shared by buses, trucks, lorries, took-tooks, private cars, motor bikes, bicycles, pedestrians, cows and several yellow dogs, all of which may be going in any direction (except for the dogs which sleep on or beside the road).

Buses and trains provide public transport in conjunction with the 3-wheel took-tooks. Buses are plentiful but dirty, overcrowded and don't seem to cope well with the demand. The trains are good but in need of capital investment. The danger is that as the Sri Lankan economy grows, there will be more private cars leading to excessive congestion and pollution. Obesity and diabetes are also a growing concern. Another danger is falling into the trap that building freeways will reduce congestion. There will also be issues with finding parking spaces for private cars.

We are aware of some preliminary work on an overhead rail system in Colombo and this might be a partial solution for the most congested areas. (A similar system works well in Kuala Lumper). Another solution for both Colombo and the regional cities might be larger versions of the ultra-light rail [see previous article] which works at grade and would replace the queues of buses, moving commuters more comfortably, efficiently and sustainably.

The bus station at Tangalle on the south coast of Sri Lanka

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