

The Infrastructure Road to Recovery

A Railway Boom

what I was proposing was rational and proper for Australia, and, as you can see, the political system was not equal to it."

There were several reasons for this: first, it was a national project, and the nation's rail and port systems are all state-based, so no state

would sign on to a national project which might "divert" anything away from its own collapsing state rail systems and ports; and second, more importantly, because the federal government has been on a mad privatisation, user-pays binge with the rail system, like everything else.

While refusing to back the revolutionary Asian Express, Prime Minister Howard has lent federal backing, and funds, to a privately-funded \$10 billion rail scheme from Melbourne to Darwin, the Australian Transport and Energy Corridor (ATEC), headed up by

former Liberal party fundraiser and Howard friend Everell Compton. Aside from the fact that ATEC will mostly run along existing routes, which thus negates the essential point of the Asian Express, its high-speed aspect, and the fact that federal government backing for

such a project was effectively let without a tender, under coming depression conditions, the privately-funded ATEC will never be built in the first place.

A Mag-lev Rail System



The future of world transportation—magnetically levitated trains capable of travelling at 550 km/hour.

Addressing a conference in Germany on May 5, 2001, Lyndon LaRouche sketched a bold vision of the role of mag-lev centred *development corridors* in transforming the Eurasian continent, a concept which is equally applicable to our own vast, undersettled and undeveloped country:

"This is not railroads, this is not Silk Roads, these are corridors of development, which run a range of, let's say, up to 100 kilometers in width, from the Atlantic to the Pacific, going in various directions. Along these routes, as we did in the United States with the transcontinental railroad, the area on either side of the transportation axis becomes immediately, in and of itself, a sustainable area of economic development. By that means, you can branch out from the main corridors into subsidiary corridors of development and capture the area. If we can make that kind of link, one interesting kind of change occurs immediately....

"Take transportation alone. People who don't think, think that ocean freight is the cheapest way to move freight. That is not true. The cheapest way is across land, but not by truck; trucks running up and down the highway tell you that the economy is being dismantled. It costs too much, it's intrinsically bad. Railways are much better. Integrated transport systems, featuring railways, especially magnetic levitation systems, are excellent. Magnetic levitation systems move passengers more rapidly, but those same systems for moving freight, that is really a wonder. That's where the payoff comes. If you can move freight from Rotterdam to Tokyo at an average rate of 300 kilometers per hour, without much stopping along the way, and if for every 100 km of motion across that route, you are generating the creation of wealth through production as a result of the existence of that corridor, then the cost of moving freight from Rotterdam to Tokyo is less than zero. What ocean freight can do that? Did you ever see a large supercargo ship producing wealth while travelling across the ocean? And at what speed?

"Therefore, we have come to a turning point in technology, where the development of the internal land-mass of the world and the great typical frontier is Central and North Asia. That is the greatest single opportunity before all mankind for development."

The mag-lev era has already begun. On January 23, 2001, China and Germany signed a contract to begin the construction, in Shanghai, of the first magnetic-levitation rail line in the world, which will begin commercial operations in

February 2003. The implications of this first contract were summed up in a recent evaluation in *Executive Intelligence Review* of November 2, 2001:

"This revolutionary new technology is not only suited for passenger travel at velocities of up to 500 km/hour—for which the German mag-lev system Transrapid was optimized—but in the future will also allow the creation of fully automated systems of freight transport, with performance parameters which up to now are completely unattainable. Such future freight systems will automatically transport containers from one chosen spot on the network to another, like a computer-controlled industrial conveyor belt. At speeds of up to 250 km/hour, a single mag-lev container freight transport line could support as much freight daily, as 20 or more parallel conventional railroad lines.

"With the Transrapid, the ancient invention of the wheel is for the first time becoming obsolete. There is no longer mechanical contact between train and track; instead, the train is suspended and propelled forward by electronically steered magnetic fields alone, in a friction-free manner. As a result, magnetic levitation technology allows, in comparison with conventional wheel-track technology, a much greater rate of acceleration, steeper ascents, narrower curves, low noise volume, higher safety because of fully automatic operation, and greatly reduced wear-and-tear on the train and roadway.

"Studies of mag-lev routes in Europe have shown that not only is the technology quicker than air travel for relatively short routes, but that even for such longer routes, as from Berlin to Moscow or Kiev, mag-lev

is more than competitive. Especially if one keeps in mind the transfer time between airports and city centers, and the lengthy checking-in and boarding procedures of air travel. At the same time, the Transrapid system has all the normal advantages of passenger railroads: above all, that not only the terminal points of a line, but rather an entire series of cities in between are serviced by the same train, with the unlimited possibility of stopovers for the passengers.

"The Transrapid thereby contributes to the general development of the entire corridor. Whereas for an airplane there is only uninhabited, empty air between takeoff and destination."

The Chinese are roaring ahead with their Shanghai-Pudong mag-lev project. "Commander" Wu Xiangming, the director of construction for the project, has organized the construction in a military-engineering style, which will allow the project to be completed in less than two years. The Chinese took only six months to build an entire new factory near Shanghai, which started producing the concrete and steel components of the line in November 2001, to the amazement of German journalists who have visited the site. As China extends the line to Beijing, the system's components would no longer be produced in Germany, but entirely in China, with a view to export to other Asian countries, just as we could establish our own mag-lev industry in Australia.

The Shanghai-Pudong project has provoked an explosion of interest and large-scale proposals in the Netherlands, Germany, Poland, the U.S. and other countries. In Australia, when examining options for a link from the city of Melbourne to the airport, Victorian Premier

Steve Bracks expressed interest in a mag-lev line. An express trip would take eight minutes, while a trip with two stops, at Keilor Park and Sunshine, would take only 13 minutes, with speeds hitting 250 km/hour. In NSW, Transrapid also has a concept for a regional/orbital system to link Sydney, Wollongong and Newcastle.

For two decades now, Australian federal governments have been dithering and doddering over a Sydney to Canberra or a Sydney-Canberra-Melbourne high speed link, with one proposal after another being turned down as not cheap enough. But, in retrospect, perhaps all this stonewalling will prove to have been useful, since it prevented Australia from being stuck with a much slower, less effective technology than the mag-lev.

The most insightful recent evaluations of high speed trains for Australia in the past decade are found in two reports by former MP Peter Nixon, who in 1995 chaired a working group reporting to the Victorian State Government on rail strategy. His committee's report, "The High Speed Train Report" was updated by him in July 2000, in his 'High Speed Trains in Australia: Beyond 2000.'

In the latter, he makes a couple of crucial points. First, that "Our country is similar in geographic area to continental United States and mainland China. A large proportion of our relatively small population live in coastal cities separated by significant distances. Almost half of that population live in and around our two largest cities, Sydney and Melbourne, separated by a distance of approximately 900 kilometres. Millions more live in the cities and major regional centres of the east coast corridor, and the aggregation of city and regional Australians along its path, that high speed trains will be required to effectively serve."

The benchmark for trains in this corridor, he notes, is an express trip between Sydney and Melbourne in three hours or less, to effectively

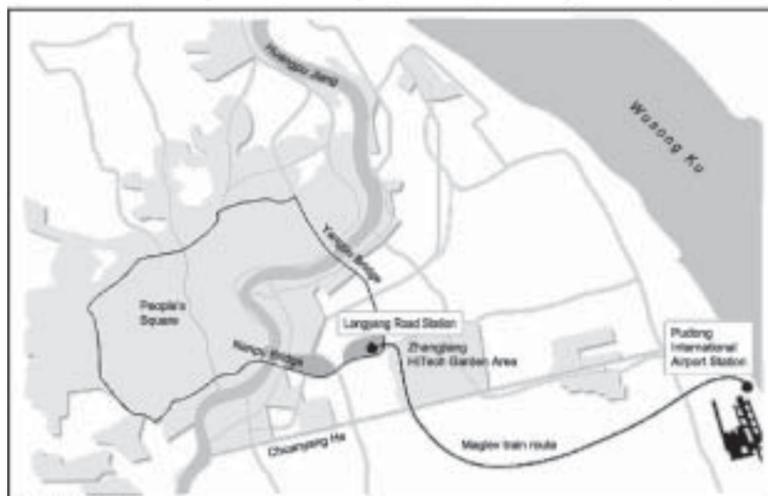
compete with air travel. Some "wheel on track" technologies could conceivably do this. "However", Nixon observes, "in a world of rapid technological change, there are indications that conventional 'wheel on track' rail systems will in the very near future be succeeded by 'wheel-less' trains propelled by the principle of magnetic levitation (maglev). Over the past quarter century, such systems have moved from the development stage to operational readiness. Maglev, with its promise of a quantum increase in operating speeds, remains the 'new technology' seeking to challenge the established performance of 'wheel on track' systems.... [E]nough international experience has been gained to demand that the proper evaluation of a major east coast high speed rail network in Australia must include a thorough and objective assessment of the maglev option. At a time of generational change in the rail industry the technology equation remains paramount. The high speed option selected for Australia will be required to overcome the related tyrannies of distance and time for the next 100 years or more."

But, even more important than the technical aspects of mag-lev, is the call with which Nixon ends his report, which is an implicit call for a great mag-lev scheme, as part of a broader national purpose of nation-building:

"Nations need to build. Citizens and communities need, and overwhelmingly seek, to be a part of that embrace of a national purpose. The strength of a national high speed train project lies in the fact that such a project will deliver much more than an alternative transport mode to service existing travel needs. Such a project would provide an important national focus for the development of Australia into the 21st Century. Considerations of national vision and national purpose go to the very heart of our Australian character and psyche."

Well said. Now, let's get on with the job!

The Shanghai-Pudong Transrapid Maglev Project



Source: Transrapid

Above: The world's first commercial mag-lev rail line, from Shanghai to the Pudong Airport, is being built now and will open in Feb. 2003. Right: The 30 km Shanghai-Pudong mag-lev line is expected to be expanded rapidly to Beijing, a distance of 1,250 km.

Planned Maglev Projects in China



Source: Transrapid.