

Finally, Maglev Leadership

Washington hosted the Transportation Research Board's (TRB) annual meeting just prior to President Obama's inauguration. One month earlier, over 200 participants from 16 countries attended the 20th bi-annual International Maglev Systems Conference in San Diego. Only this year, there were no TRB maglev presentations, nor were there any Federal Railroad Administration or Federal Transit Administration representatives. So, why was the most advanced transport technology conspicuously ignored? Answer: the Bush administration was anti-maglev and discouraged official review or acceptance of the technology.

Things have changed. President Obama provided some much needed leadership and pushed America forward when he personally insisted that maglev construction funding be included in the stimulus bill. He truly understands the urgent need for high-speed electric-powered intercity transportation systems that are energy and land-use efficient.

Maglevs use magnetic levitation for propulsion and suspension along dedicated guideways and represent a transportation revolution because several inherently undesirable characteristics of wheeled transport are eliminated or dramatically reduced, namely: vibration, noise, and wear & tear on parts from friction. Higher speeds are achievable without the penalty of increased maintenance costs. This translates into higher system reliability and increased sustainability due to the resulting longer service life and lower life cycle costs.

Paying for maglev systems will require America's transportation priorities to be less automobile and

airline dominant. During the past eight years the federal government invested over \$50 billion in new runway and taxiway projects, new airport facilities and new air traffic control technology. While new runways allow more take-offs and landings, they do nothing to reduce America's dependence on oil or reduce highway congestion, much less aid travel in inclement weather or improve traveler comfort.

What if \$50 billion was spent on comfortable high-speed maglev systems? America's airlines are not adequate substitutes for mass transportation; especially for distances of 600 miles or less. Imagine a 70-minute maglev trip from NYC to DC, including stops. Why fly?

Maglev can provide an alternative to long car trips by providing a highly reliable and super fast intercity transport system that connects all the major cities along a route. Such routes will create demand and development for commuter feeder lines and spur new development.

During the TRB, several professionals commented that maglev was "too expensive," but then admitted having no access to technology specifics or actual costs. Yet, without this data it is impossible to assess maglev's value or viability.

There were even senior FTA officials who were not aware of the low-speed 5.6-mile urban maglev system running in Nagoya, Japan

performing with 99.97% on time reliability these last 4 years!

Indeed, the dual-track Shanghai maglev project was cost effective at ~\$60 million per mile, especially considering the challenging alluvial soil conditions. Since then, new guideway and construction techniques have lowered costs by as much as 30%. And data from the canceled Munich project show it was additional tunneling costs, not technology costs that killed it.

Maglevs are cost effective because capital costs, recovered through annual maintenance cost savings, that are about 30% less than traditional HSR. This means faster repayment of loans, increased financial sustainability, and excellent potential for profitable system operation without tax subsidies for operations & maintenance.

What gets lost with the focus on cost is that maglev's on-time trip reliability is close to 100% regardless of weather conditions. Travelers choosing maglev over air travel would free up runway slots and eliminate the need to build more runways, or highways: pollution reduced, commerce enhanced by ultra-reliable transport.

Maglev systems fit seamlessly into the vision of developing first rate, financially sustainable and livable pedestrian communities that enhance, rather than compromise, citizen mobility or health. It's about time we "got with the program."

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