

Using Maglev for Evacuation

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Are We Really Ready to Evacuate an Area Being Threatened by a Predictable Path Hurricane? Over Half of the U.S. Population Lives in Coastal Counties. Another Large Number of Us Live in the Flood Plains of River Cities.

9/11, Katrina, and Rita have transmitted a strong message. After billions of Federal spending in emergency preparedness planning, the inhabitants of our urban areas are still in serious danger during natural disasters or terrorist attack. Weighing the costs of our vulnerability in a time of emergency requiring evacuation we must give priority to a national effort to build a robust and redundant means of evacuation.

Media images of miles of long stalled lines of bumper-to-bumper motor vehicles fleeing the devastating winds and flooding from the deluge of rain, storm surges, and breached and topped levees have exposed the inadequacy of the national transportation system. The only real system we have in place is the highway and gasoline and diesel fueled autos and buses that can even come close to providing a means for people to get out of harm's way. Aircraft and trains are limited in capacity and can only make a minor contribution to an evacuation.

Rita following close on the ravages of Katrina caught the attention of Federal, State, and City officials and their citizens. When evacuation orders were given by cities and towns along the Rita threatened area, they were heeded by fearful residents who fled to the highways to compete for precious lane space. About 3 to 4 million people from the greater metropolitan areas of Houston, Galveston, Port Arthur pulled their vehicles onto the highways to join evacuee filled buses in a 100 mile long traffic jam that proceeded away from the coast at average speed of advance of less than 1 mile per hour. Most of the Houstonians were still on the road after 28 hours into the trip. Many cars and stations ran out of gas. Children loaded vehicles, and the demands for digestive tract rest stops contribute to a high level of personal misery that comes with our dependence on automobiles and highways. Evacuation from the Texas coast was an excursion into hell. Millions were in danger of being trapped in 150 mph winds and flooding in a stalled line of automobiles. However, there is even greater danger in not heeding the evacuation plan, staying put and being caught in structures that are simply blown way or flooded.

A weatherproof National Interstate Maglev Network would have eliminated a great deal of the misery of mass evacuation. Maglev transport can rapidly and safely evacuate enormous numbers of people from a threatened region, even in severe storm conditions. It can also bring in large amounts of food, water and other supplies to devastated areas. Because Maglev vehicles travel on elevated guideways above flood level, it can keep operating even when a region is flooded. Moreover, the elevated Maglev hollow-core guideway can also serve as a robust, weatherproof conduit for electric power and communications lines to the ravaged area.

A National Interstate Maglev Network could be built alongside the Interstate Highways and on old railroad trackage. At full national expression it would connect all U.S. cities and towns, including their mass transit systems, in a seamless web, with 4 out of 5 Americans living within 15 miles of a Maglev station. Travelers would board Maglev vehicles bound either for another local station in their urban/suburban region, or for a distant city. They would travel at 300 plus mph in comfortable, first class seating, at much less cost than air coach class. There would be no delays due to weather or congestion, and Maglev vehicles would leave for their destination every few minutes. Most intercity trucks would travel on Maglev, and permit transporting high value items such as priceless museum collections and documents to safe repositories.

This vision of 21st Century transport is based the Maglev inventions of Drs. James Powell and Gordon Danby and their continued work on a new, powerful, lower cost 2nd generation system that can carry trucks, autos, and other freight as well as passengers.

Using prefabricated, mass-produced monorail guideway beams and piers, Maglev routes can be quickly and easily erected alongside the Interstate Highways. Using flat panels placed on existing railroad tracks, frictionless Maglev vehicles can quietly glide into dense urban centers without having to expensively re-do existing infrastructure. (For their invention of Maglev, Powell and Danby were awarded the Benjamin Franklin Medal for Engineering in April 2000.).

The U.S. Government needs to aggressively enter the Maglev race for National security. A maglev industry needs to be developed to complement our highway, airline, and rail systems. The demand for high speed intercity guided transportation and lower speed commuter systems, which are urgently required to relieve the gridlock around our growing urban areas, is being satisfied by imported rail and light rail systems. Each city is left on its own with very little guidance in the way of standards and the intermodal capability of these systems. Reminiscent of the United States railroads in the 19th Century, which had 7 gages in operation prior to the Civil War, it appears that we are headed for a similar situation again. It would be the height of stupidity to end up with a bunch of incompatible maglev and commuter systems.

Powell and Danby's inventions in the 60's sparked an international race to put Maglev system into commercial use as the next generation of surface freight and passenger transport. The German and Japanese governments funded aggressive R&D programs. The U.S. government did not. 9/11, Katrina and Rita are timely warnings, the time has come for the U.S. Government to spend smart and establish a *Federal Maglev Guideway Gage Standard* for use State and local transportation authorities.

The 2nd generation U.S. maglev system is not only far superior technically with greater transport capability, but it also will *not* require continuing government subsidies to sustain it. What better reason is there for the Congress to support a domestic Maglev industry that can financially sustain itself after it is demonstrated?