

Building a High-Speed Railway Network

Earlier this year, Richard Freeman and Hal Cooper published a study on the requirements for upgrade of the heart of the U.S. rail system, in two phases, to electrified high-speed rail moving freight at about 100 mph, and then later to magnetically levitated rail, at upwards of 300 mph (*EIR*, June 10, 2005). They charted first the double-tracking and electrification of 26,000 route-miles, and then onwards to a total of 42,000 route-miles, the heart of the network, which carry 65% of our freight and 70% of our intercity passengers, although constituting only 29% of our total rail mileage.

The chart here shows estimated bill-of-materials requirements for 5,000 miles of rail lines radiating from Chicago through the industrial Midwest. These results can then be extended to the full 26,000 miles of the first phase of the upgrade (not shown). Our special interest here, again, is the role of the machine-tool design factor of today's auto industry, in permitting mass production of large parts of these infrastructural requirements. For the most part, this has never been attempted before.

Already, tens of thousands of skilled autoworkers have lost their jobs over recent years, with tens of thousands more slated to be "excessed" in the immediate period ahead. The loss of these plants not only means an economic disaster for the cities and towns where they are located, but also could set off a financial disaster.

Rail Network's Bill of Materials = Skilled Jobs

- 5,000 miles of high-speed, double-tracked rail corridors
- 1,250 all-electric locomotives—a job for the auto industry
- 3.7 million tons of high-strength steel
- 6,000 megawatts of new electric power
- 5,000 miles of new electricity transmission lines and catenaries
- Hundreds of new substations
- 2.7 million tons of cement
- 100,000 new skilled jobs
- Multiply by 8 for a 42,000-mile, national high-speed network
- For maglev rail, 25,000,000 tons of steel

But the United States cannot afford to lose this high-skilled capability. In order to rebuild a modern transportation network, skilled workers will be in urgent demand in order to start up mass production of locomotives, track, and the electric power sources which would be required to power a modern electric-rail system. Around a core of highly skilled workers, this rail-network project will require the employment of many, many more unskilled workers, who, as in the experience of World War II, will rapidly become upgraded and trained.

In reality, to save the U.S. economy, we don't have a choice. We must modernize our transportation system, in order to be able to move freight, as well as people, more rapidly and economically. The shift to truck transport, which has occurred as a result of the deliberate downsizing of the rail network, has cost the U.S. economy an enormous amount. The fact that this project will create hundreds of thousands of good-paying jobs, is the lawful result of returning to the American System approach of public support for investment in infrastructure, as one of the linchpins of creating a productive economy.

Reverse Deindustrialization by 2020—Build High-Speed Rail Networks

