

The Anglo-American bankers and their environmentalist friends don't want infrastructure built. Their real purpose is to deindustrialize and depopulate the United States. If this policy continues, the United States will disintegrate as a nation. These forces are trying to revert the agriculturally and industrially developed Mississippi flood plain back to swamps and buffalo preserves. They will attempt to turn California, which holds so much of America's agriculture and its highly skilled aerospace sector, into a sunny tourist land, after perhaps dividing it into three parts. They are deurbanizing the urban centers of the eastern and midwestern United States, which are suffering from power shortages not only in the winter, but also in the summer. Broken water mains, untreated and disease-transmitting sewage systems, bridges in disrepair, the breakdown of schools and hospitals, all of these factors are forcing the shutdown of civilized urban life.

Moreover, the United States has not repaired significant damage from previous disasters. For example, according to an article in the Aug. 23, 1993 *Journal of Commerce*, one year after Hurricane Andrew had hit Florida, in the neighborhood of Southwest Homestead, only 27 out of 494 buildings—5%—were being repaired. Hundreds of thousands of people living in South Dade County, which Andrew pulverized, face the ugly prospect of losing their insurance sometime during 1994, since the insurance companies are unloading their policies. Were another Hurricane Andrew to hit, these people, the lucky ones who were insured then, would be out in the cold.

Unless a vicious cycle is broken, the deterioration of infrastructure, and thus of the national economy, will accelerate. It is budget cutting and monetarist "free enterprise" which are responsible for this crisis.

This report will proceed in the following manner to document the lack of infrastructure redundancy and the infrastructure breakdown.

First, we will examine the catastrophes of January, bringing out the real untold story behind the treacherous policy that led to the worse damage during the Los Angeles earthquake. It will also look at the real frightening picture that characterizes U.S. electricity generation, power supply, and fuel consumption.

Second, we will take a longer historical look. Using the highest scientific standpoint, the LaRouche-Riemann economic model, which is rooted in the concept of the rate of change of relative potential population-density, we will examine the underlying causes of the decline of the last 30 years, which have precipitated the infrastructure breakdown today.

Third, we will examine the monetarist budget-cutting mentality which is responsible for the infrastructure crisis.

Finally, we will present the positive program, developed by Lyndon LaRouche, to end and reverse the crisis, ushering in a new era of growth through infrastructure development.

Milton Friedman and the California quake

by Richard Freeman

What does free-market economist Milton Friedman have to do with the devastation caused by the Los Angeles earthquake? Plenty. The earthquake was a natural incident, but it was in no way the cause of the disaster that ensued. Nor did the disaster start on Jan. 17, 1994, but 20 years earlier, when Friedman's policies of usury and monetarist budget cutting took hold—as we shall see.

The Los Angeles earthquake was not an exceptionally powerful quake (see **Table 1**). An expert in the field, Richard McCarthy of the California State Seismic Commission, stated simply, "This is not a big earthquake." But he added, "We shouldn't have had so many failures." A member of the California Department of Transportation, Jim Drago, said, "We had what you would call a catastrophic collapse. *This was a surprise.*"

For now, it may be impossible to physically halt earthquakes, and difficult to predict them, but it is still not inevitable that large damage must result. Apartment complexes, water mains, aqueducts, electricity lines don't ever have to crumble; homes, businesses, and critical highway overpasses need never collapse again. At least \$20-25 billion of the damage of the quake of Jan. 17 could have been avoided. There exist 1) state-of-the-art technologies that should have been applied to structures throughout Los Angeles, and weren't, and 2) emerging advanced technologies whose research should be adequately funded, and whose final product should be built in earthquake zones. The Japanese, who are the most advanced in the world in seismic structural engineering, are already doing this.

The gutting of California infrastructure

In 1980, *EIR* founding editor Lyndon LaRouche co-authored a book entitled *The Ugly Truth About Milton Friedman*, which exposed Friedman's brand of usury-driven free-market economics. Friedman ruled out all dirigistically directed physical economic growth in which government credit-generation plays a role in expanding manufacturing, agriculture, and infrastructure. Such growth increases the tax revenue base, while expanding social services, without increasing taxes. In reality, this Hamiltonian approach is the only way to balance the federal budget. Instead, Friedman considered only the money flows in the economy as important. Friedman declared that drug-money dependent Hong Kong was his model of the best economy in the world, and

TABLE 1

The frequency and size of earthquakes

Richter Scale magnitude	World-wide occurrence
8 and higher	1 per year
7.0-7.9	18 per year
6.0-6.9	120 per year
5.0-5.9	800 per year
4.9 or less	9,150 per day

Source: Global Seismology and Geomagnetism On-line Information Service.

openly advocated legalizing cocaine.

Friedman was the guiding hand and ideological father of Howard Jarvis's California Proposition 13 movement in 1978, a populist tax revolt meant to destroy California's tax revenues and infrastructure. Friedman and his protégé Sen. Phil "Landfill" Gramm of Texas, were the ideological sponsors of the 1985 Gramm-Rudman federal budget-balancing act, which in the next eight years added an astonishing \$120 billion to the federal budget deficit. Finally, Friedman was an ideological author of the derivatives market: In 1971, he founded the Chicago Board Options Exchange to trade speculative derivatives. This market has exploded in size, and charted the course of the economy, along with other key actions, into a usury-driven "post-industrial" society.

After June 6, 1978, California taxes for infrastructure took a nose dive. On that date, Howard Jarvis, a representative for the apartment building real estate interests, with a major boost from the media and a faction of Wall Street, convinced 65% of California voters to vote for Proposition 13. Proposition 13 had a nice populist ring: "Taxes and Washington politicians are the root of all evil. Eliminate them, and everything will be fine!" This is hogwash.

In 1979, as Proposition 13 became state law, taxes were rolled back on California residential properties to 1% of the residential properties' 1975 assessed valuation. Thereafter, as a result of a complementary law, future property taxes were limited to the annual rate of inflation or 2%, whichever was lower, and required a two-thirds vote of the state legislature to impose any new state taxes. A subsequent amendment, part of the same tax revolt, required that any proposal to raise taxes which appeared on the California ballot, could not pass with a simply majority, but would require a two-thirds vote.

When Jarvis fought to pass Proposition 13 in 1978, the U.S. economy was in trouble. There were a series of national economic policy decisions with deleterious effects: the 1971 decoupling of the dollar from gold, the 1973-75 oil shock, the 1978-79 oil shock, which was just starting, and the cumulative effects of post-industrial policy, dating back to 1965-67. Taxes did fall on homeowners, although homeowners

were enjoying in California a 75% run-up in the value of their homes between 1975 and 1978. Jarvis and his friends wanted the increased value of their homes, but not the taxes that went along with that. Moreover, they wanted to focus matters locally, and not take on the national depression, which if they had, and the tax base had been rebuilt, there would not be need for tax increases.

It is useful to see some of the groups that benefitted from the "people's tax revolt." Twelve percent of the Proposition 13 tax reductions went to landlords; business properties accumulated an additional 28% of the reductions, but within this 28% figure, there is a sharp differentiation. Standard Oil of California, which backed the tax revolt, saved a staggering \$47 million the first year alone.

The "tax revolt" sought to obliterate the local tax base, and did. It deliberately created a whole group of people, who, provided they did not move, would pay year after year, effectively the same 1% tax rate, with minor inflation adjustments. In California, in some counties, as many as 82% of the residents have not moved since 1978. This wiped out the tax base, and severely hampered local government. Money for education, police, and other services dried up. In Humboldt County (population, 120,000), the county had to cover worn roads with *gravel*, rather than with more expensive pavement. Robert Hendrix, the former administrative officer of Humboldt County, said, "We're on our way back to 1934 in the way our roads are maintained."

The last point is of great importance for our earthquake story. County and local governments cannot be counted on for undertaking the expensive overhauls needed for earthquake protection. The Milton Friedmanite-shaped "tax revolt," brought into existence through the vehicle of Howard Jarvis, brought California's county and local governments to this precipice.

Onset of the national depression

Meanwhile, in 1985, the U.S. Congress passed the Gramm-Rudman budget-balancing bill. Local revenue-sharing and other programs that aided state governments, as well as local governments, especially infrastructure funds, were slashed. Nonetheless, between fiscal year 1985 and fiscal year 1993, because of Gramm-Rudman, the U.S. annual budget deficit widened by an additional \$120 billion to over \$300 billion.

The U.S. physical economy's breakdown hit California with a fury. Between 1987 and 1992, U.S. defense spending, in inflation-adjusted dollars, fell by 40%; further cuts are now in store. The aerospace-defense industry, representing, along with the machine tool industry, the most capital-intensive plant and equipment, and most highly skilled work force in America, is being decimated. Over 30% of the aerospace-defense sector is concentrated in California. So far, 162,000 California aerospace-defense workers have lost their jobs. Those workers earned between \$35,000 and \$75,000 per

year. Their tax revenues are now eliminated. Since mid-1990, California has lost over 450,000 jobs, and 100,000 people, net, have emigrated from the state.

Gov. Pete Wilson, a George Bush Republican, has cut more than \$12 billion from the state budget over the last few years, in an insane bid to balance the budget, while not addressing the issue of the national depression.

This chain of events, is the *rigorous reason* that on Jan. 17, a natural incident was transformed into a catastrophe for the citizens of Los Angeles.

State-of-the-art infrastructure not used

Before the earthquake occurred in Los Angeles, state-of-the-art structural engineering designs already existed to retrofit existing structures.

Take the case of highway or freeway support columns, upon which the deck of the highway rests. Columns built before new stringent requirements went into effect in 1988 in Los Angeles, consist of vertically standing steel support bars (called rebars), encased in a circular concrete moulding. The problem is that under the stress of an earthquake, the concrete in the old column shears apart, leaving the exposed steel bars standing alone, to support the entire weight of the highway deck. Under these conditions, and the continuous vibrations caused by the earthquake, the steel bars would, in turn, buckle, sending the deck plummeting to the roadway below.

Had state-of-the-art retrofitting been applied, a set of steel rings and/or a sheet of steel would have been wrapped around the concrete encasement of the highway support columns. A layer of polystyrene would have been inserted between the concrete and steel to provide cushioning and insulation.

Thomas Hanks, a seismologist with the U.S. Geological Survey in Menlo Park, California, told the Jan. 18 *Wall Street Journal* that roadway damage Jan. 17 appeared to exceed damage caused by the 1971 quake at Sylmar, which is near Los Angeles. While noting that the Jan. 17 quake was centered closer to heavily populated areas of the San Fernando Valley, Hanks nevertheless challenged the effectiveness of the state's highway improvement efforts. "We've had 23 years [since the Sylmar quake], to gather knowledge, pour more cement, and install more reinforcing steel," he said, "yet more bridges came down."

The reason that, in the quarter-century since the Sylmar quake, many of the most important structures in Los Angeles had not been retrofitted, was budget-cutting.

Beginning in 1971, following the Sylmar quake, the state of California spent hundreds of millions of dollars installing devices to prevent roadways from being knocked off their supporting pillars during periods of seismic stress. Then, after the 1989 Loma Prieta quake hit the San Francisco Bay area, the state initiated a second round of construction to reinforce pillars and foundations holding up the highways.

The job cost \$3.4 billion, but after more than three years,

only \$1.5 billion was laid out for the job, less than half. As a result, only 300 of the 865 bridges and overpasses designated for reinforcement were modernized.

This was typical of California's performance. Highway officials said that the worst roadway damage occurred at overpasses where columns and foundations hadn't yet been reinforced. The eight-lane Santa Monica Freeway is a glaring example. It was scheduled for retrofitting, but this was not done, and 289,000 vehicles travel on it daily. The Santa Monica Freeway is the most heavily traveled highway in America. Had the Jan. 17 earthquake struck during rush-hour, when the freeway has peak traffic, there could have been hundreds or thousands of deaths. *Now it will be closed for repairs for 12-18 months.*

Only a tiny portion of the older buildings in the region which should have been retrofitted—with some state assistance—to meet the more stringent and scientific design limits imposed on construction in 1988, have had this done. The Northridge apartment building which collapsed and killed 16 residents, for example, reportedly had a "soft" or unreinforced first floor, which would have to be strengthened by steel supports to meet today's building standards. This was not done. Old masonry buildings, where poor Hispanics live, collapsed. More than 11,000 dwelling units have either collapsed or been permanently condemned because of the quake. Many thousands of people are living in tents or in the open air.

Two aqueducts in the San Gabriel Mountains ruptured, shutting off water service to almost 50,000 customers. The aqueduct system should have been retrofitted, but wasn't. The list goes on. Power supply was knocked out, a few days after the quake, to 100,000 people. Environmentalists had forced the closure of four gas-burning plants in the environs of Los Angeles, which had supplied 80% of the city's power. Now, Los Angeles must "wheel in" power from other areas and even other states, and that system broke down.

Through it all, as Governor Wilson toured the earthquake zone, rather than offering a solution, he emphasized the ideological theme that, come what may, *no new taxes* will be raised.

More advanced technologies

Retrofitting and other state-of-the-art technologies are vital and could have prevented, perhaps, between one-half and three-quarters of the \$30 billion in damage associated with the quake. This would have been a godsend, saving more than half the lives that were lost. But one of the crimes committed for the last 10 years is that new and far more advanced engineering technologies for resisting earthquake damage were not explored and pushed forward toward testing and implementation. This is not surprising, since California and the United States as a whole did not even utilize existing technology.

Expenditure on earthquake-resistant engineering techno-

logies in the United States is far less than \$1 billion annually. Compare that to the \$30 billion-plus damage from this quake, and the \$4.5 billion damage from the 1989 San Francisco Bay quake.

One idea is to develop "active" quake-resistant technologies, which are different from the "passive" systems in use since 1971. The Japanese are leading the way in this. The idea of active rather than passive systems has two main aspects. First is the development of "smart materials," which have special properties. One "smart material" is a fluid mixture of mineral oil and aluminum oxide. When electricity passes through the fluid, it becomes more viscous. The higher the applied electrical voltage, the greater the viscosity of the mixture. Earthquake vibrations automatically transmit current to, and thus activate, the smart material. A structure in an earthquake zone would be built into the smart material. During an earthquake, the change in viscosity of the smart material, would allow the structure to yield to the quake, but also transmit back to the quake some of the quake's own energy. The structure is no longer a passive sitting duck.

Dr. Saïd Saïdi, professor and researcher of Civil Engineering at the University of Nevada at Reno, told the Jan. 20 *Wall Street Journal* that smart materials applied to bridges "can absorb a great deal of energy." He said that such materials can allow bridges to sway without collapsing.

Another "active" approach, being studied by Tsu Soong, professor of civil engineering at the State University of New York at Buffalo, uses hydraulic systems and/or steel tension wires to produce repelling forces which counterbalance and right a structure against the jolts of an earthquake.

The exciting feature of this earthquake research, is that it does not accept the condition of soil or of the earth's substrate as given.

This research is run on a shoe-string budget in the United States. No force in government or outside it has actively demanded it be developed and funded appropriately. Most of these American research projects are years away from the development phase.

This is not the case in Japan, however, which leads in these technologies, and has already the technologies in several areas. The Japanese have also experimented with constructing buildings on rubber pads, something that has belatedly been picked up in the United States, and is now being tested in 10 U.S. structures. Japan has a population of 130 million, living in an area one-third the size of California (population 30 million); thus its urban structures are closely packed. Japan is a nation living directly over some earthquake faults. Unlike the United States, Japan takes that situation, and human life, very seriously, and the Japanese have an "Earthquake Day" every year. Everybody learns what to do during an earthquake. In some parks, there are earthquake simulator rooms, which shake strongly. A family enters the rooms and learns what to do.

Japan also leads the United States in the building and use of "shake tables," which shake violently and are used to test the seismic features of scale-model replicas of structures to be built. Shake tables are to earthquake structural engineering what wind-tunnels for testing airplanes are to aerodynamic engineering. Yet, while the United States has only one table, which is 20 feet long, Japan has 20 such tables, with one table on the island of Sinkoku, which was used to test scale models of nuclear plants, being 50 feet long. Larger tables allow larger models to be employed in the tests, and thus more accurate knowledge to be obtained.

One final note. The earthquake did open up the question of having Los Angeles build a mass transit system. Up through the 1950s, the Los Angeles area was served by an excellent mass transit system called the Red Car. It was essentially an over-sized trolley car, sometimes more than one car linked together, which travel on railroad-type tracks around the county. The Red Car system was simply bought out by a cartel which was formed for this purpose, consisting of, among others, companies associated with automobile and bus interests. This cartel immediately shut the system down and scrapped it. The same thing was done in Baltimore and other cities. Now is the time to push ahead on a modern, fast, and comprehensive Los Angeles mass transit system.

An electricity grid 'doomsday' scenario

by Richard Freeman

The January cold snap forcefully raised the question of just how close the eastern two-thirds of the United States' power grid may have come to a power blackout lasting several days, had the policy of "rolling brownouts" not worked.

First, we settle the question: Just how cold was January, really? The National Climatic Data Center attempts to quantify the cold by a measure called "heating degree-days." A heating degree-day indicates how many degrees the day's mean temperature fell below 65°F. So, if Day X had a mean temperature of 0°F, then Day X had a "65 degree-day." Then the sum of the heating degree-days for a month is stated as a cumulative total. With the temperature for some of the last days of January 1994 estimated, the National Weather Service projected that January 1994 would produce a 1,017 degree-day month. If that projection holds true, then this January will not be as cold as January 1985 or January 1988. January 1982 was a 1,130 degree-day month, a full 10%