

of the past 40 years, with special attention to the marker sectors of aluminum, aerospace, energy supply, and water management. We give here a first-approach assessment, using the method LaRouche recommended in “What the EIR Economics Charts Will Show You” (see *EIR*, Sept. 3): a county-by-county, and per-household and per-capita study of physical-economic reproduction.¹

The Principle of Electricity

The modern Northwest’s genesis was the command decision by FDR to build it up as a single, integrated regional economic unit, based on water infrastructure on the Columbia River. On Sept. 21, 1932, campaigning for President in Portland, Roosevelt unveiled the plan to build four extraordinary infrastructure projects in the “four quarters” of the United States:

“We have, as all of you in this section of the country know, the vast possibilities of power development on the Columbia River. And I state in definite and certain terms, that the next great hydroelectric development to be undertaken by the Federal government must be that on the Columbia River.

“Here you have four great government power developments in the United States—the St. Lawrence River in the Northeast; Muscle Shoals [the initiating project of the Tennessee Valley Authority] in the Southeast; the Boulder Dam [later renamed the Hoover Dam] in the Southwest [on the Colorado River], and finally in the Northwest [where the Grand Coulee and Bonneville Dams were built]. Each one of these, in each of the four quarters of the United States, will be forever a national yardstick to prevent extortion against the public and to encourage the wider use of that servant of the people—electric power.”²

The headwaters of Columbia River, which is the fourth largest river in North America, rise in British Columbia; the river wends southward into the American states of Washington, Oregon, Idaho, and Montana. About 85% of the enormous 259,000-square-mile watershed it covers, is in the United States. The Columbia was a flood threat. Conversely, its waters did not reach a portion of the expanse of the flood plain, which had rich soil, and required only water to become fertile. The U.S. Army Corps of Engineers did a study in 1931, which recommended a comprehensive plan for constructing ten dams on the Columbia for irrigation, flood control, navigation, and power generation. The Grand Coulee Dam would be uppermost in the chain of dams located in Washington state, and the Bonneville Dam would serve as the key downstream project, located in Oregon (see **Figure 1**). The Grand

FIGURE 1
Columbia River Basin



Source: U.S. Army Corps of Engineers

Coulee and the Bonneville were the systems’s crown jewels, each an engineering marvel.

The Grand Coulee is 530 feet high and 4,173 feet long, and contains 10.5 million cubic yards of concrete, making it the world’s largest structure. Because of its huge generators, it was the world’s largest hydroelectric plant until the 1980s, when Brazil’s Itaipú generating facility was built. By the early 1980s, the U.S. part of the Columbia River basin was covered with 31 Federal multi-purpose dams, with powerhouses which possessed a combined generating capacity of more than 18 gigawatts. The Northwest was furnished with abundant electricity to power factories, farms, irrigation pumps, local electricity grids, etc.

In 1937, the Bonneville Project Act was passed. The agencies that constructed the dams would continue to operate them. But a new authority was to be created, soon to be named the Bonneville Power Administration, which would build the transmission lines and market the electricity. The Bonneville Project Act directed the Bonneville Power Administration “to encourage the widest possible use of all electric energy . . . and to prevent monopolization thereof . . . to insure that the facilities for the generation of electric energy shall be operated for the benefit of the general public.” This reference to the General Welfare clause is the guiding principle for the devel-

1. There, LaRouche made clear that graphic animation is the clearest depiction of historic physical economic changes. This cannot be done in print; it is beginning on *EIR* online, at www.larouchepub.com/eiw.

2. See Richard Freeman, “Then and Now: Why Roosevelt’s Explosive 1933-45 Recovery Worked,” in *Economics: At the End of a Delusion*, Washington, D.C., LaRouche in 2004, April 2002.

FIGURE 2a

Aluminum: Operational Production Capacity, 1955



Sources: U.S. Geological Survey; Department of Commerce; EIR.

LaRouche asks, "Do we make life better, firms, cities, and states, more efficient, by allowing Enron-like swindles, which loot the consumers of power, loot and destroy the existing generating and distribution networks, and drive the price of power up to the point of triggering chain-reaction collapses in economy?" Here is aluminum production in America's Northwest states of Washington and Oregon, which grew on President Franklin Roosevelt's New Deal's bountiful and cheap hydro-electricity, and from the mobilization for World War II.

FIGURE 2b
Aluminum: Operational Production Capacity, 1970



Sources: U.S. Geological Survey; Department of Commerce; EIR.

By 1970, aluminum production expanded with inexpensive, reliable power, under a beneficial regime of regulation by the Bonneville Power Authority. (Counties that are white have no aluminum production.)

FIGURE 2c

Aluminum: Operational Production Capacity, 1990



Sources: U.S. Geological Survey; Department of Commerce; EIR.

In 1990, the Northwest accounted for one-third of all of America's aluminum production.

FIGURE 2d
Aluminum: Operational Production Capacity, 2003

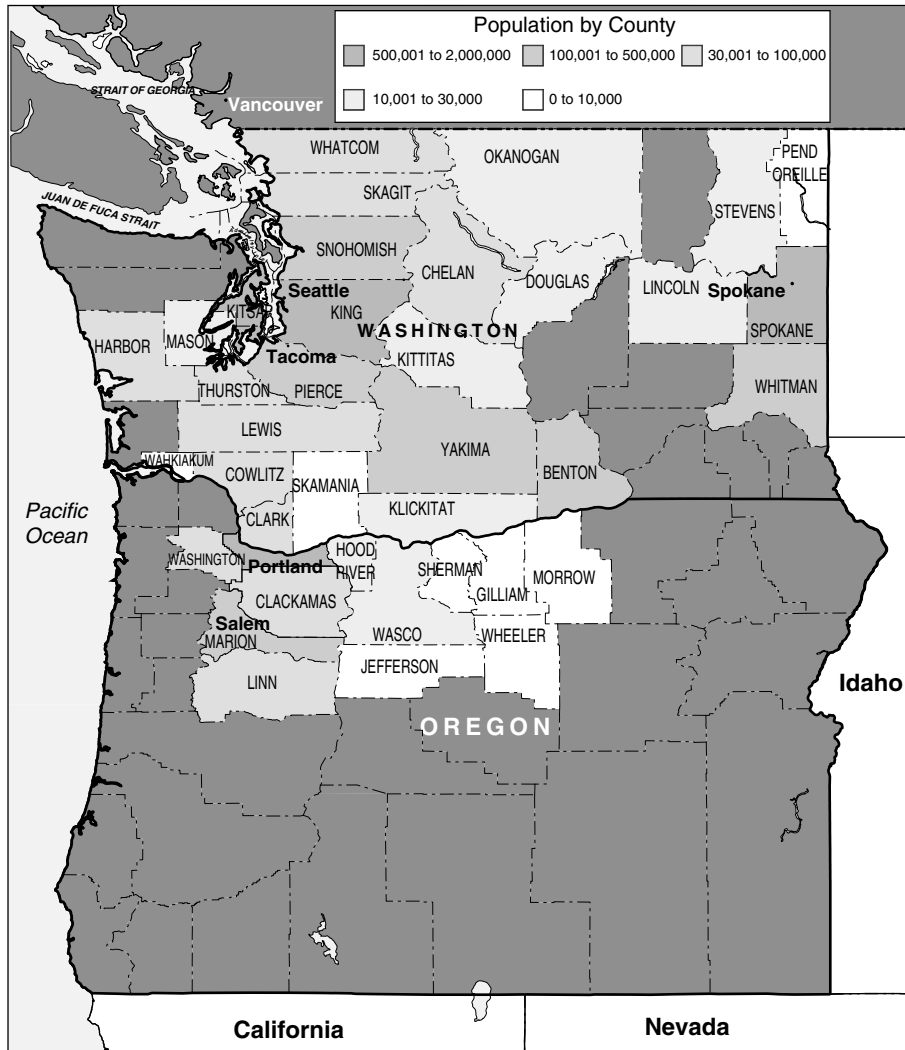


Sources: U.S. Geological Survey; Department of Commerce; EIR.

In 2001, the Dick Cheney-backed deregulation of energy began in California. As the Northwest was simultaneously hit with a drought, which lowered water levels for electricity generation, the Northwest electricity markets went sky-high. Aluminum production shut down, likely for good.

FIGURE 3a

Population of Counties in Aluminium Production Region, 1950



opment of the Northwest.

The efficiency of the Grand Coulee’s and Bonneville’s hydropower pushed the price of electricity down to less than 2¢ per delivered kilowatt hour.

Aluminum and Northwest Development

In March 1940, Roosevelt called for America to build 26,000 planes. Scientists pointed out that the outer skin of the plane should be made of strong but light aluminum, and emphasized that aluminum production requires enormous supplies of cheap electricity. The choice of sites for new aluminum plants was trivially obvious: As the number of dams built on the Columbia River increased, the expanding electricity supply of the Bonneville Power Authority was the foundation for the growth of the aluminum industry. The Aluminum

Company of America (Alcoa) had begun operating an aluminum plant in Vancouver (Clark County), Washington, in September 1940. In 1941 and 1942, additional production sites were built at Mead (Spokane County), Longview (Cowlitz County), and Tacoma (Pierce County) in Washington state, and at Troutdale (Multnomah County) in Oregon. At the peak of operation, these five plants alone utilized nearly 500 megawatts of BPA electricity.

It was during this time, also, that Boeing Aircraft seriously expanded its production at Renton (King County), Washington, near Seattle; and at Everett (Snohomish County), Washington. Further, also during the war, at a 586-square-mile site along the Columbia River, the Hanford Engineer Works was constructed, which produced plutonium, as part of the Manhattan Project.

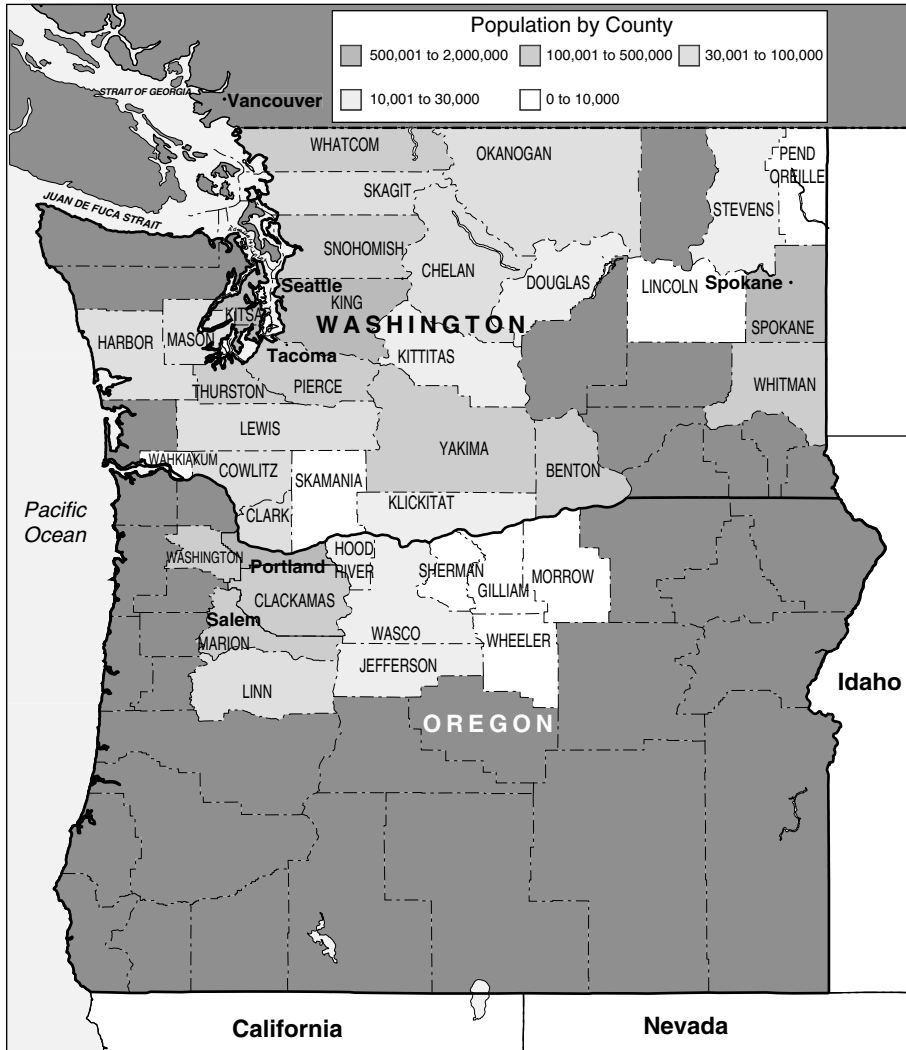
Led by plentiful electric power (and soon thereafter nuclear power), the aluminum industry, the aerospace industry, and abundant withdrawable water for irrigation, households, and industry, Roosevelt’s great infrastructure project on the Columbia had founded Washington’s and Oregon’s future growth.

After the war, as **Figures 2a-c** show in time-lapsed stages, the expansion of the Northwest aluminum industry’s production, both in production volume and in number of counties in which production is occurring. It was concentrated in seven counties in Washington state, and two counties in Oregon (one county in Montana is not shown). In 1955, aluminum production was still getting its legs. Production plants had not even been established in three of the primary nine counties. The only plant producing more than 100 tons per year was located in Spokane County, Washington.

By 1990, production was at its maximum, and Northwest alone accounted for more than one-third of all of America’s aluminum production. Altogether the aluminum plants employed somewhere in the range of 7,500-8,000 workers, but there were tens of thousands more employed in machine-tooling plants, and plants which produced goods consumed by the aluminum production.

FIGURE 3b

Population of Counties in Aluminium Production Region, 1980



We halt before going to the last image in this series, and shift to the series of **Figures 3a-3b**, which shows the population, by county, in both states, for the years 1950 and 1980, respectively. The FDR-inspired growth of aluminum production, as well as aerospace, agriculture, electricity etc., had a positive effect on population growth, as it created the goods, and the decent-paying jobs for families to form and grow. Figures 3a and 3b concentrate on the nine counties in which aluminum smelting is located, plus the two where Boeing production occurs, and, in addition, the counties which are contiguous to these designated 11. A worker may be employed at an aluminum plant in Chelan County, Washington, but live in a bordering county.

The increased production, and the increased conditions for economic growth, created a growth in population in all

but the most rural counties. Other factors contributed to population growth, but the increased production and the increased conditions for economic growth are the primary causes.

Enron Strikes

Then, along came Enron. We have written about this many times, so we only summarize the main points, and refer the reader to *EIR* articles on the subject.

The deregulation of electricity in California had been spearheaded by then-Gov. Pete Wilson (R), who rammed through and signed the legislation in 1996. It took effect in 1999, but 2000 was its first year of full force. A statewide wholesale market was created, the California Power Exchange (PX), where “merchant” energy companies could buy and sell electricity, at spot or next-day prices. The prosperous era of long-term three-, five-, and ten-year electricity contracts at affordable prices, set between energy producer and public utilities, came to an end. The long-term contracts had created stability, so that utilities and their customers, such as businesses or households, knew what electricity would cost them. Instead, on the California PX, merchant energy companies could either buy and sell energy contracts for electricity that they didn’t have, or conspire to shut off

production, thereby forcing prices sky-high and making a killing on trades.

Ken Lay’s Enron, and other pirate companies such as Mirant, Dynergy, and Calpine, were expert in manipulating the market in a great swindle. When, in March 2001, California Gov. Gray Davis protested, Vice President Dick Cheney—whose Energy Task Force was in the middle of the swindle—snarled that California needed more, not less deregulation. By May 2001, the average price of power on the California PX was above \$2,000 per megawatt-hour.

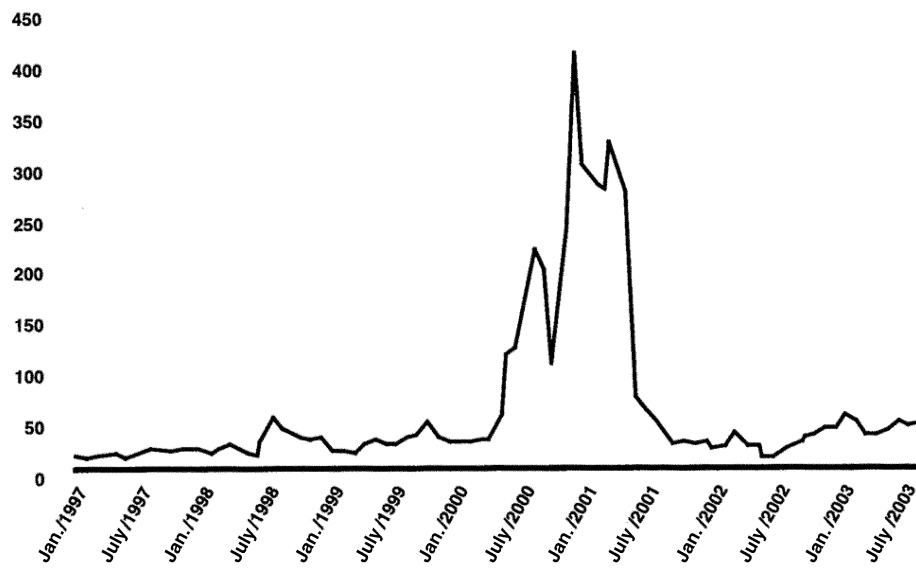
Historical connections transmitted the crisis to the Northwest. The Bonneville Power Authority had signed agreements that obligated it to sell a certain portion of its power supply to California in the event of need. Enron’s manipulations had guaranteed a California power shortage, requiring that the

FIGURE 4

Pacific Northwest Monthly Wholesale Electricity Prices, 1997-2003

(Dollars per Megawatt-Hour)

(Dollars per Megawatt-Hour)



Source: GAO/Platts-RDI PowerDAT data.

BPA honor its obligations and ship electricity to California. And in 2000, the Northwest was suffering its second-worst drought in 72 years, which had lowered water levels and thus power generation output. The BPA was left with an electricity deficit. As a result, the BPA had to go onto the private Power Exchange, to purchase electricity, whose price had been inflated by Enron! **Figure 4** shows that by late 2000, the average monthly wholesale price for electricity in the Northwest had jumped to nearly \$450 per megawatt-hour, more than ten times what it had normally been in the past.

The BPA was in a vise. It had contracts to sell electricity at a fixed price to the aluminum industry and other long-standing customers, but it had to buy electricity at a high price on the “market,” and sell it to the aluminum and other sectors at a much lower price. This would bankrupt the BPA. Panicked, it proposed that the aluminum industry be compensated to shut down, at a rate that it made it more profitable for the aluminum companies to stay shut than to produce aluminum! Several companies agreed. This perverse arrangement, one of several that the California electricity deregulation spawned, is still in effect today.

The Northwest aluminum industry was devastated:

- In February 2001, Alcoa sold its 116-ton smelting plant at Longview (Cowlitz County), Washington to an investment outfit called Michigan Avenue Partners, which, it appears, may close down the plant on a long-term basis.

- In 2002, Alcoa demolished its 121-ton smelting plant at

Troutdale (Multnomah County), Oregon, after it had been idle for more than a year;

- In 2002, Kaiser Aluminum & Chemical Group agreed to sell its 73-ton smelting plant in Tacoma (Pierce County), Washington, to the Port of Tacoma. Under the agreement, the Port of Tacoma would demolish the plant;

- In October 2004, Alcoa permanently fired all the workers—whom it had kept on a special basis—at its 204-ton smelting plant at Wenatchee (Chelan County), Washington. This appears to be in preparation for permanently closing the plant, which has not operated since 2001.

Now, look at **Figure 2d**, which shows the denouement of the Northwest aluminum industry. **Figure 5** shows the steep downturn of the *national* aluminum industry, on a per-capita basis, since the 1970s.

The Aircraft Sector

Boeing is the world’s largest aircraft-aerospace company. Its civil aircraft division controls 50% of the world market. Since its 1997 merger with McDonnell Douglas, it became one of the top U.S. defense aerospace companies. It is located in Renton, Washington, near Seattle.

But orders for civil aircraft, both domestic and international, have fallen. In 2000, Boeing delivered approximately 550 new aircraft to customers; in 2003, it delivered just 283, a nearly 50% decline. The reason is that as the U.S. economy has contracted and business travel has fallen, airlines such as United and Delta, suffering losses of billions of dollars per year, have ordered fewer new planes.

Boeing is now less focussed on quality, which used to be a primary concern. Pat Waters, a longtime Boeing engineer who retired recently, told the July 2004 *IEEE Spectrum*, “We used to build a better product. I’m not so sure we can say that any more.” This diminished focus on quality has led Boeing—which to assure quality used to produce almost everything in-house—to step up the outsourcing of its parts to other companies, as a cost-saving device. This has led to a new round of layoffs, on top of those occasioned by the downturn in the aircraft industry.

According to the July 7, 2004 *Seattle Times*, in August 2001, Boeing employed 80,000 workers in Washington State. After a wave of layoffs, in July 2004, it employed 52,806, a fall of 34%. The rest of the Washington aircraft sector, pulled

along in the current that Boeing creates, is also having difficulty. Its workforce is among the most skilled in any economy. The aluminum and aircraft/aerospace industries have led the parade in the accelerating manufacturing takedown. In Washington statewide, there were 360,500 manufacturing workers as recently as 1998; in June of this year, there were only 263,200, a total loss of 27%.

Figures 6a-6b show the effect on a county-by-county basis, over a longer span of time. Figure 6a shows that in 1980, there were six counties in Washington where 30% or more of the workforce was employed in manufacturing, including Snohomish County, which is one of the two centers of Boeing production in the state, and Cowlitz and Klickitat Counties, centers for aluminum smelting. Figure 6b shows that in 2000, there was but one Washington county where 30% or more of the workforce was employed in manufacturing. The next category of counties, where 20-29.9% of the workforce is employed in manufacturing, also fell.

The spread of poverty is one marker for the fall in living standards in real market-basket terms. As displayed in Figure 7, the 2000 U.S. Decennial Census showed that in 14 out of Washington's 39 counties—more than one-third—20% or more of individuals fell below the official poverty line.

Fiscal Crises

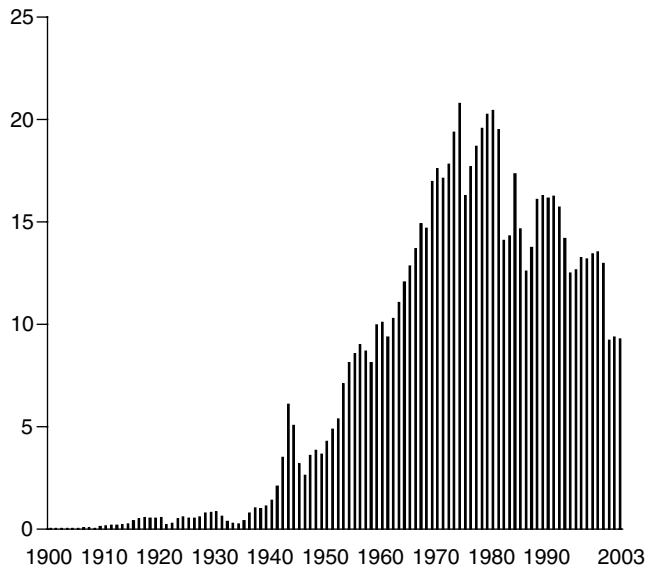
The budget crises that erupted in Washington and Oregon starting in 2000-2001, reminiscent of Mt. St. Helens. A concatenation of events was the catalyst: the disappearance of decent paying manufacturing jobs, and of manufacturing company profits, led to a reduction of individual and corporate taxes from what they should be. The blow up of the Northwest IT bubble also produced similar effects.

Washington: The Washington 2003-2005 state budget faced a \$2.7 billion deficit due to revenue shortfalls, even after making \$1.6 billion in cuts during the previous budget cycle. The state unsheathed the budget axe:

- It cut \$800 million from education funding by giving no cost-of-living increase to teachers with more than seven years of experience, delaying the reduction of class size, and reducing funding for higher education by \$131 million;
- It fired 1,000 state workers, and made the workers who still had jobs pay more of their health insurance.

FIGURE 5
U.S. Aluminum Production Per Capita, 1900-2003

(Metric Tons per 1,000 People)



Sources: U.S. Geological Survey; U.S. Commerce Dept.; EIR.

FIGURE 6a
Employment in Manufacturing As a Percent of Total Employment, 1980

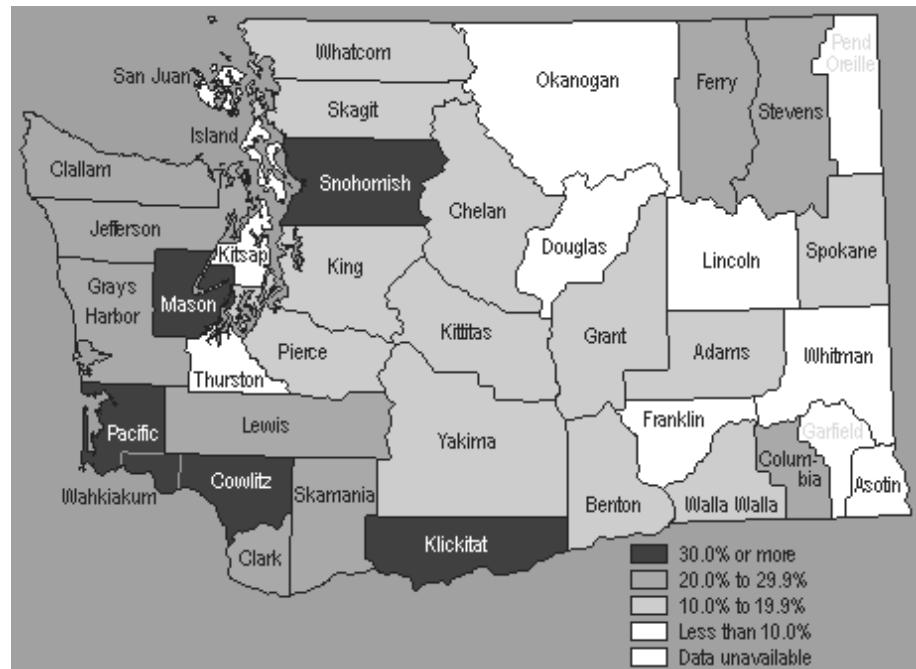


FIGURE 6b

Employment in Manufacturing As a Percent of Total Employment, 2000



FIGURE 7

Individuals in Poverty, 1999



- It slashed \$600 million from health care, by removing 20,000 out of an originally promised 120,000 openings for people in the state’s Basic Health Plan; by reducing enrollments in the state Medicaid, which provides medical assistance to the poor; and by slashing dental care for the disabled and the elderly. The state also eliminated a medical program for the indigent.

- The City of Seattle slashed \$90 million from its budget over the last two years.

Oregon: According to a Sept. 1, 2004 report on OregonLive.com, the state government estimates its shortfall for the 2003-2005 state budget deficit could be “as high as \$600 million,” although it could be even higher because tax revenues are consistently coming in below projections. This means that Gov. Ted Kulongoski would make new budget cuts on top of the ones he already has carried out.

- In March 2003, Kulongoski and the Oregon legislature removed funds for 100,000 people on the Oregon Health Plan, which provides medical assistance to low-income individuals, and removed funds for 9,000 people on the Medically Needy Program. While some officials have tried to restore the funds, others keep attempting to cut them. Hospitals have begun to remove the names of uninsured poor from organ-transplant lists.

- In 2003, the Portland school system eliminated 15-20 days from the school calendar. By March of that year, as the situation worsened, officials proposed raising the student-teacher ratio from 30:1, to 42:1.

The Northwest economy now must be rebuilt on the method utilized by Franklin Roosevelt in the first place, and perfected by Lyndon LaRouche.

A Fifth of All Mexicans Are Now Economic Refugees in the U.S.

by Dennis Small

In the course of a visit to Saltillo, Mexico in November 2002, Lyndon LaRouche proposed the launching of a policy of economic and scientific cooperation between the United States and Mexico. His proposed policy was centered on the development of the Great American Desert—which straddles the two nations—through great projects in water, energy, high-speed rail, and other essential infrastructure.

In the May 29, 2003 issue of *EIR*, we underscored two significant aspects of this LaRouche proposal:

1) That “in posing the development of the deserts, we are proposing what is arguably the *most difficult* task of planetary development.” If we can succeed here, then we have implicitly solved all, easier problems of economic development.

2) That U.S.-Mexico cooperation to jointly develop the Great American Desert should also serve as a model of a community of interest among developed and underdeveloped nations. “Would it not be interesting if we could solve the problem of development not only in a desert, but also in one where a paradigm change in North-South relations is required in order to succeed?”

“And if we are able to meet the challenge in this case, we will have met it, in principle, for the entire world. . . . The United States and Mexico have always been the decisive case, the litmus test, of North-South relations in general. . . . If we are successful in U.S.-Mexican relations, then there is hope for the entire world—even for tortured Africa, and its Sahara Desert.”

In early 2004, one of Harvard’s more notorious resident psychopaths, Trilateral Commission member Samuel Huntington, presented the synarchists’ diametrically opposite policy for the United States and Mexico. Mexicans are *the* strategic enemy facing the United States, Huntington wrote in the March/April 2004 issue of *Foreign Policy* magazine, because they threaten “the distinct Anglo-Protestant culture” on which he lyingly asserts the United States was founded. Well-timed with this overt call for race war against Hispanics, white supremacist and other vigilante groups have sprung up along the U.S.-Mexican border, and have actually begun to hunt down Mexicans who are allegedly crossing into the United States illegally.

The Hispanic side of such a potential race war is simulta-

neously being put into place—just as LaRouche warned it would back in August of 2003—around the European fascist apparatus associated with Spain’s Blas Piñar, and its networks in the Americas.

All of this is happening as millions of Mexicans, and other Hispanics, are indeed streaming across the border into the United States. They are economic refugees driven by the genocide being imposed on their countries of origin by the International Monetary Fund (IMF) and the international bankers. But they are coming not to the land of promise and growth that the United States once was, but to an economy plunging into the depths of physical economic depression. They are fleeing out of the frying pan, and into the fire.

An overview of cross-border demographics and employment over the last three decades, shows the urgency of addressing this situation with LaRouche’s Great American Desert development proposal, lest we be thrust into the race war promoted by the likes of Huntington and Piñar. What follows is the first in a series of articles in which we will take up the range of issues of such cross-border development.

Mexico’s Physical Economy Crumbles

After some three decades of modest economic growth from the end of World War II until 1982, including a serious effort at industrial development under the Presidency of José López Portillo (1976-1982), Mexico was cracked by the IMF during 1982. Over the following two decades, Mexico’s physical economy—as measured by *EIR* in terms of the per-capita production of market baskets of consumer and producer goods—collapsed by about one-third. In other words, Mexico’s physical economy became progressively less and less able to support the country’s existing population, let alone the requirements posed by natural demographic increase and societal progress. Mexico’s *potential* relative population density, under IMF policies, dropped below the level of its *existing* population density: The existing population could not be maintained.

Two things happened as a result. First, there was a sharp drop in the living standard of Mexicans. And second, Mexico began to export its own labor force. As **Figure 1** shows, as of 1970 only 760,000 Mexicans had emigrated to the United