

Step Six: Reawakening the Potential of The Workforce for Transport, Nuclear

by Nancy Spannaus

On Aug. 24, 2011, Lyndon LaRouche outlined a Seven-Step program as the only possible solution for the present threat of a global breakdown crisis. Having presented the overview in our Sept. 2 issue, and in-depth attention to Steps One, Two, Three, Four, and Five—the removal of Obama from office and re-enactment of Glass-Steagall; the reinstatement of the Glass-Steagall standard; the application of Alexander Hamilton's credit system; "honest bailouts" for the bankrupt cities and states; and NAWAPA (North American Water and Power Alliance)—we now turn to Step Six, the reawakening of the latent potential of the U.S. workforce around transport and nuclear.

LaRouche described it this way:

"[F]irst, there are other things to be considered: What we have to do, in order to rebuild this nation, and this includes the NAWAPA project—just NAWAPA itself implies that—we have to build new kinds of transportation systems, in order to get the materials into the area where the NAWAPA construction is occurring. And we have to move materials from the area in which it can be produced.

"For example, major transportation systems: The best opportunity for major transportation systems, is the states which were once known as the automobile-manufacturing region. That includes New York State; it includes Ohio; it includes Indiana, Illinois, and out to St. Louis, that area. This area is essential for building, with high skills, where existing skills are there, either latent or active, where these skills can provide the means of transportation which is integral, and other things which are integral to the development of the NAWAPA system. So this then becomes a multiplier growth factor in the U.S. economy. That is a crucial point."

The Physical Deficit

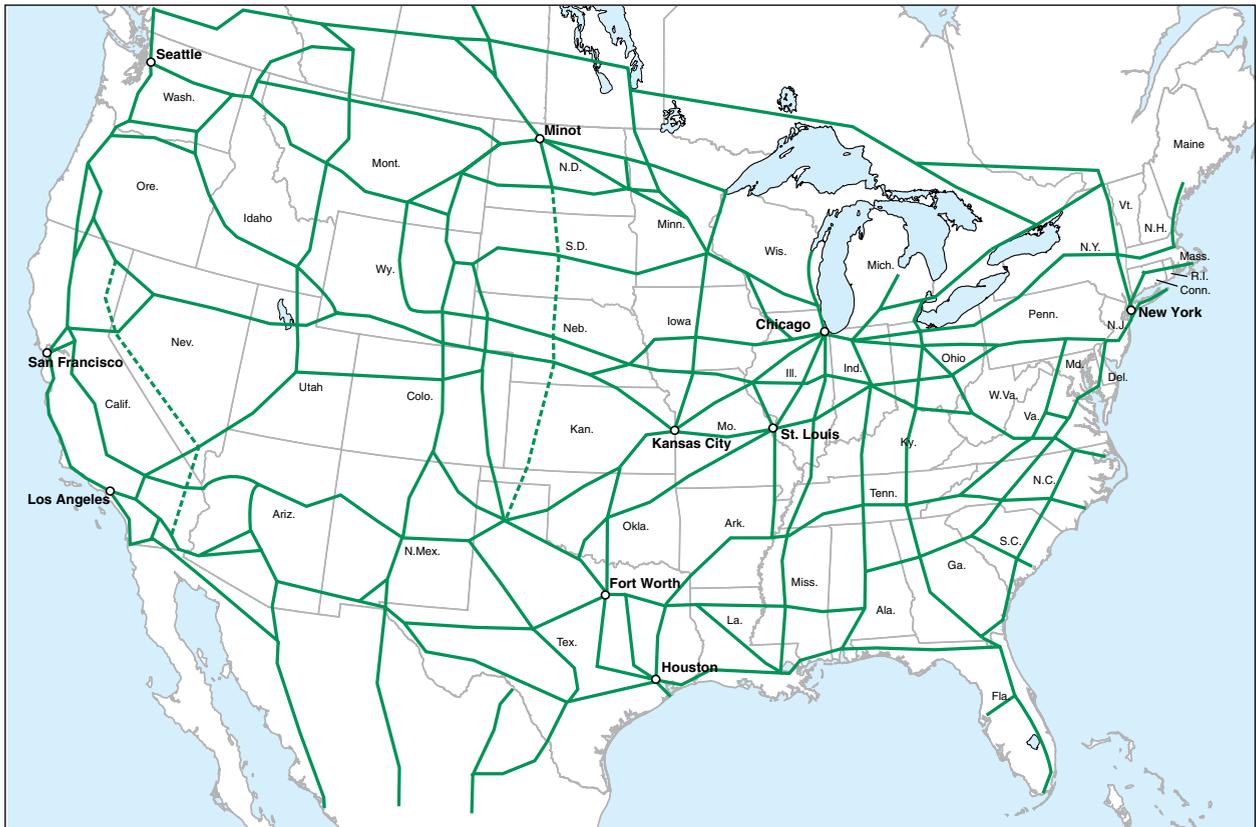
Over the past 40 years of deindustrialization, the United States has increasingly lost the potential for carrying out a great project of economic development. Physical plant and equipment have been shut down, rail lines have been shut, power production has been oriented to conservation, and the skilled workforce of engineers and machine-tool workers which was once the envy of the world has been sidelined; those workers are dying off, without replacements. If the United States is to reverse course, and experience an economic renaissance, a radical shift is required.

The first areas in which the deficit must be addressed, are in power production and transport. Today's U.S. electrical grid is already strained, unable to simply maintain regular service, due to lack of maintenance, technological upgrading, and expansion. To begin to produce the amount of power that will be required for both NAWAPA's components, and the inputs into it, will mean moving to a higher platform of power production, namely nuclear fission power—on the way to nuclear fusion.

Take this example from NAWAPA itself: The LaRouchePAC's Basement Team estimates that the 2,450-foot Idaho Saw Tooth Lift would require 26,000 MW of power. While the original Parsons plan¹ called for this to be met by the 23,000 MW that would be generated by hydropower along the Clearwater river (which drops 2000 feet after the Ice Harbor Dam), nuclear power would be more efficient. Sixty-five 400 MW modular nuclear plants, such as the GE-Hitachi PRISM, would be needed. The settlement of northern and remote regions of the continent will lead to the long-awaited use

1. NAWAPA was originally proposed to Congress by the Ralph M. Parsons Company in 1964.

FIGURE 1



The reindustrialization of the United States demands both an upgrading and expansion of the rail transport system. Here, a plan for a 42,000-mile-long network of national electrified rail, proposed by engineer Hal Cooper and endorsed by EIR.

of ultra-efficient, high-temperature nuclear process heat for synthetic hydrocarbon fuels, efficient chemical processing, and water desalination.

But clearly the need is much broader. Simply to gear up production for the materials required to build this huge water-management system will mean a significant expansion of electrical-power production, as factories reopen. And one of the top areas of new electrical needs will be the transportation network required to move materials and people to the construction sites: The U.S. rail grid must be hugely expanded and electrified.

Given the shrinkage of the U.S. rail system over the past decades, not to mention its increasing decrepitude, there is no way that the system could accommodate the surge of demand which NAWAPA would represent. However, as the accompanying map shows, plans exist for how to utilize current trackage or rights-of-way to create a 42,000-mile national network of electrified rail, which could transport both the people and the freight required to the areas where they are needed,

many of which areas have no modern transportation networks at all.

Specifically for NAWAPA, there are the following needs:

- Various Union Pacific and Burlington Northern Santa Fe rail lines from the Midwest into Idaho will need immediate double- and triple-tracking.
- The Canadian Pacific routes servicing the Fraser River and Rocky Mountain Trench areas will need immediate double-tracking.
- The Alaskan-Canadian rail system must finally be completed, with two routes of double-tracked line connecting Prince George to Fairbanks, and Dawson Creek to Fairbanks, for a total of 2,200 miles of track.
- 975 miles of double track to connect Fairbanks, Alaska with Egvekinot, Chukotka, including a 60-mile-long tunnel and/or bridge crossing the Bering Strait.

Even more daunting is the scale of the freight which will have to be transported on these new, improved rail lines. For example, LPAC estimates the need for pro-

ducing and transporting:

- Hundreds of millions of sacks of cement; nearly 100 million tons of steel; tens of millions of tons of copper and aluminum; and a vast array of new machinery required to construct the project and move approximately 32 billion cubic yards of earth;

- Equipment for drilling 50 tunnels with a total distance of over 1,000 miles, displacing 860 cubic yards of rock, employing an unprecedented use of tunnel-boring machines, and possibly new techniques;

- A massive amount of heavy electrical equipment, involved in: a) power generation stations, including forebay, penstocks, head gates, turbine wheels, generating units, and switchgear, and b) pumping stations, including large motors, large capacity pumps, valving, fittings, intake & discharge headers.

A Reindustrialization Program

LaRouche and his political movement, from its inception, have been fighting to save, and revolutionize, the industrial capacity of the United States. Our efforts started in the 1970s, and included the establishment of the Fusion Energy Foundation, the National Democratic Policy Committee, the Strategic Defense Initiative, and myriad other emergency programs for Great Projects in water management, transportation, power production, and urban development.

Despite these efforts, the high-technology centers of the United States have been systematically gutted over the past 40 years, including aerospace, machine tools, and engineering.

In May of 2006, when it became clear to LaRouche that the last concentration of high-technology machine-tool capability in the U.S. economy, the auto industry, was about to be gutted, LaRouche's Political Action Committee launched an all-out drive to counter this move. LaRouche drafted the Economic Recovery Act of 2006, which called for creation a Federal Public Corporation, by Congress, which would act, as in World War II, to take over threatened sections of the auto industry, and finance their retooling for immediate appli-



TVA

The Tennessee Valley Authority board has authorized completion of one unit at the Bellefonte nuclear site near Scottsboro, Ala. (shown here). A full recovery program will require hundreds of such plants to be constructed, starting immediately.

cation to the urgent needs of the nation, including refurbishing waterways, reversing the depletion of aquifers, aggressive development of high energy-flux-density power sources, and reorganization and development of mass transportation.

As part of organizing for this bill, *EIR* did a major study of auto capacity in the United States, pointing out the massive amount of industrial space, much of it richly supplied with machine tools and with machines of both high precision and flexibility, which was threatened with destruction, as well as the valuable skilled labor force about to be thrown on the scrap heap. In summary:

“The planned shutdowns will cost 75,000 skilled industrial jobs directly; and through immediate radiating effects on smaller supply plants and machine-tool shops, 300,000 more. What is about to be shut represents, in automobile-industry terms, the capacity to build 2.5 million or more cars and light trucks a year. But in terms of urgent national economic investment, it represents a unique industrial capability to build the United States ‘a new national infrastructure’ of transportation, power, and so forth.”

What LaRouche was proposing was not a simple “save the auto industry” program, but something akin to what President Franklin Roosevelt did in his wartime mobilization: converting a capability currently being used to maintain a consumer economy, to one driving forward and carrying out a leap in technological and

productive performance—as in the conversion of auto plants in the 1940s into airplane-producing factories; and in the 1960s, to the creation of components for the Apollo Program for space exploration.

Such an upgrading, when applied to transport and power, represents the higher-level platform of productivity required for, and consistent with, the NAWAPA Great Project. In transport, the first steps in increased efficiency are the measures necessary for electrification of the rails, to be followed as soon as possible by installation of magnetically levitated (maglev) trains, and eventually vacuum tubes. In power, the requirement is a massive surge in construction of nuclear power plants, while abandoning the insane waste of resources in “renewables” and market-based “reforms.”

However, thanks to cowardice in the Congress, in particular, the shutdown of auto went ahead. More than 200 GM, Ford, and Chrysler production facilities, of all sizes and functions, have been closed since 2006. A few have been reopened, as Obama continues to showcase, but many have been destroyed, and some even converted to amusement parks!

Where Is the Manpower?

Which brings us to the most crucial question of all for Step 6: Where will the skilled manpower be found to accomplish these tasks?

Worse than the destruction of physical plant and equipment needed for the massive building projects ahead, has been the destruction of the labor force. Nearly one-half million skilled workers lost employment in the aerospace sector, for example, even before Obama’s recent elimination of NASA manned space flight. And hundreds of thousands of skilled workers have been eliminated from the automobile industry just over the last decade.

EIR’s late 2010 review of the auto industry provides a small slice of the picture.

When Obama took office in January 2009, auto-makers and suppliers employed 713,600 workers, a loss of 45% of the workforce since 2000. By June of 2010, the industry had lost another 43,000, bringing the total to 680,900. That was half of the workforce a decade before.

Starting in the Fall of 2008, the Federal government—first Bush, then Obama—began to “bail out” the auto industry; and Obama hasn’t stopped bragging about it since. But these bailouts are not only minuscule in comparison to the numbers lost, but the average

wages and benefits of those being brought back to the factories are dramatically lower—a de facto lowering of labor capacity.

Looking more broadly than at auto per se, the Commerce Department reports a huge loss of the nation’s most skilled workforce over the first decade of the 21st Century. Among electrical machinery workers and engineers, for example, 222,000 jobs were lost between 2000 and Summer 2010—37% of national employment in those skills. Sixteen percent of jobs among electrical power machinery producers have been lost. Similar or higher percentages obtain among civil and heavy construction engineers—the very categories of workers required for the Great Project which will uniquely reverse the decline of the U.S. and world economy.

How many jobs will be needed in order to do the production, construction, and planning work for the transport and power needs of NAWAPA? LPAC’s Basement Team estimates that a few million will be required immediately, with concentration in this high-skilled area. What can be done?

The first step is to bring those workers who have been furloughed back onto the job. In many cases, they will have to function as trainers for young people who have been so miseducated that they can’t possibly do the work on their own. Some of this training will be in the nature of Civilian Conservation Corps camps, for youth who will have to begin with jobs requiring lower level skills, but will study to catch up. Other such training will be “on the job,” as the factories get orders to gear up once again.

The crucial additional point is that we have no time to waste. The older, retired members of the engineering workforce are generally the most skilled, and they are rapidly getting beyond the age of being able to work, or are dying. They must be immediately put to work reproducing their skills in younger generations, in order to get the economic boom launched.

The United States today is, of course, desperate for a “jobs” program, to deal with the devastating level of unemployment, poverty, and collapse of the living environment. Once NAWAPA is adopted as a mission, the need for productive employment in necessary ancillary areas, such as power and transport, will more than fulfill that desire for jobs—probably bringing us into a labor shortage immediately, and certainly a shortage of skilled labor. In some sense, we will be in a situation parallel to that of our early Republic—where once again, we put our highest value on human creative labor and ingenuity, in order to build the nation.