plausible. I certainly don't have a better idea than that one; certainly, not a more beautiful or striking one.

Later in the *Timaeus*, Timaeus, the astronomer, tells us that God set the planets and the orbs in motion as the means for measuring this presence of eternity as measured through Time. That's why the planets orbit the way they do, for that reason.

Plato then returns to the discussion of the relationship between this most perfect of creations, and the actual physical ephemerals which are present to Man's senses, the things which seem to be moved by material necessity.

Absolutely nothing which the act of becoming bestows to the changing realm of the senses belongs to eternity, since these are the forms of Time which imitate eternity, and revolve according to a metric.

Mind and Soul, however, are not ephemerals, and are thus the highest forms of the created universe:

For it must be said that, of all beings, Soul is the only one that has the right to possess Mind, because Soul is invisible, while earth, air, fire, and water are visible. For it is necessary that the lover of Reason and knowledge, seek the first causes of rational nature.

Plato's search for the first causes of rational nature brings him to the following conclusion of decisive importance for our knowledge and our understanding of the physical universe:

Because the birth of this world came forth as the mixed result of the coming together of Reason and Necessity, Reason rules over Necessity by persuading her to drive the greatest part of the ephemerals toward what is best; and our universe was initially put together when Necessity was defeated by rational persuasion in this fashion, and by these principles.

Reason rules over Necessity, Plato has told us, and drives it to the best results. Translation, if I may be allowed: *Invention is the Mother of Necessity*. It is not that problems which arise from necessity somehow create, from within its bowels, some creative breakthrough or invention. It doesn't work that way, no matter what you were told. It works the way Plato has said.

And since Invention is the Mother of Necessity, and not the other way around, Plato concludes—if I may paraphrase Leibniz from centuries later—that Man is the crown of Creation. In Plato's words:

God gave each one of us a divine genius, that which, as they say, inhabits the highest part of our body, in order to uplift us from the earth toward our heavenly kinsmen, since we are an offshoot, not earthly, but heavenly.

We are not a virus; we are not a worm; we're not a piggy. We are an offshoot heavenly. And this is not a "market" out there; it's an *economy*. And for that reason, there is no reason whatsoever for this little piggy to keep going to market. It's time for a change.

### The Case of California

## Energy Deregulation Has Been a Disaster

by Richard Freeman

The following is excerpted from a speech to the conference of the Schiller Institute and International Caucus of Labor Committees, in Reston, Virginia, on Feb. 18. The full speech, titled "No Imports, No Lights," analyzed three forces that have created the ongoing destruction of the U.S. economy: the collapse of the physical economy, as exemplified by layoffs and declining production; energy price hyperinflation, typified by the case of California; and the collapse of the U.S. economy's global function as "importer of last resort." Our excerpts here focus on the second of these three tendencies. For information on the other two, see the following articles by Richard Freeman in EIR: "The Bursting of the U.S. Import Bubble," Jan. 19, 2001; "Collapse of U.S. Imports Threatens World's Leading Economies," Feb. 16; and "U.S. Economic Breakdown Enters New Phase," March 9, 2001.

... Presently, a ravenous, thieving policy of looting large revenue streams from the energy process in California, is choking California's economy and its citizens to death. This is being done under the name of deregulation and price competition....The well-cultivated story is that that deregulation has something to do with lowering prices—if not now, then at some time in the future. If you believe that it is intended to lower prices, then you probably believe the letter in the mail from Ed McMahon that says you have won a million dollars.

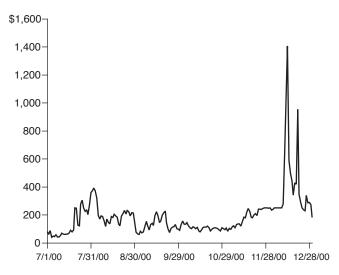
Let us state the truth clearly: Deregulation is a policy that intentionally removes the protective safeguards that existed under electricity regulation, so that now a bunch of thieves, like Enron, or AES, or Reliant, or Duke Power, can charge whatever manipulated high price they wish for electricity on the spot market, and if you don't pay it, they will withhold

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FIGURE 10

# Deregulation Sends California Electricity Prices Soaring (Day Ahead Average Unconstrained Market Price)□

(\$ per Megawatt-hour)



Source: California Power Exchange

the electricity until they get the price they are demanding. This is what they did to the state of California, this is what they are doing to the nation. That is deregulation. They are gouging loot, and you don't get that through low prices.

Let us see, what these electricity merchant thieves, who claimed to be interested in low prices, actually charged. Figure 1 shows the Day Ahead Average Unconstrained Market Price on the California Power Exchange. This is the average price that a utility in California would have to pay for electricity if it bought the electricity the day before it is supposed to deliver it. This graphic starts in July 2000. What is not shown, and what you need to know, is that in 1999, the long-term contract price for electricity, not sold through the Power Exchange was approximately \$30 per megawatt-hour (a megawatt is a million watts). The real action came on Dec. 13, 2000, when the Unconstrained Market Price on the Power Exchange hit \$1,407 per megawatt-hour, which is 4,500% inflation over the normal and stable price of \$30 per megawatt-hour. Even when the price came down after Dec. 13, it still hovered at a price approximately 1,000% above the \$30 per megawatt-hour price.

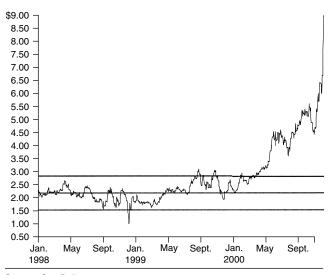
The energy bandits transfer this wealth, which they are gouging out of the economy, into the speculative bubble.

Electricity is not the only energy source, in which speculation is creating inflation. **Figure 2** shows the price charged for natural gas at the Henry Hub, which is the major spot market for purchase and sale of natural gas. You see that between January 1998 and March 2000, the price of natural

FIGURE 2

### Henry Hub Daily Spot Prices for Natural Gas Compared to Typical Range for 1998-99

Dollars per Million BTU



Source: Gas Daily.

gas traded in the range of \$1.50 per million BTUs (British thermal units), and \$2.50 per million BTUs, with the average price about \$2 per million BTUs. But by October 2000, the outlaws had manipulated the price up to \$9 per million BTUs, which is the last point on the graph that you can see, and then in November-December, it rose above \$10 per million BTUs. That's a fivefold increase in the price of natural gas in only seven months. Recently, the price has come down a little, but it is still far above where it was and what it actually costs to explore and produce. It should be mentioned that natural gas's price used to be regulated at the well-head, but was deregulated by Jimmy Carter.

**Figure 3** is the price per barrel of West Texas Intermediate Crude Oil. What is most revealing, is that the oil price was driven down during 1997 and 1998, triggering a shakeout of some of the weaker players, which allowed the better-financed players to move in and buy them out. In late 1998, this culiminated with British Petroleum's takeover of Amoco Company, Exxon's merger with Mobil, and Total's merger with Petrofina. Then, in part to recoup the debt from the takeovers, the price of oil was sent tripling to above \$30 per barrel. There were other reasons for the price increase, including the worldwide hyperinflation.

Now, we will look at how this price inflation on the wholesale level translated to inflation on the retail level, either the home resident, or the businessman, or the farmer. **Figure 4** shows what it cost a California resident to heat his home this Winter with natural gas. It was constructed by taking the official cost to heat a home with natural gas in California, for

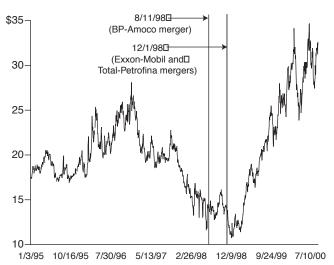
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#### FIGURE 3D

### Oil Price Skyrocketted in Wake of Big Mergers□

Oil price, West Texas crude ☐ (\$ per Barrel) ☐

millions-line under figure head-Helvetica Reg 7/12



Source: Wall Street Journal

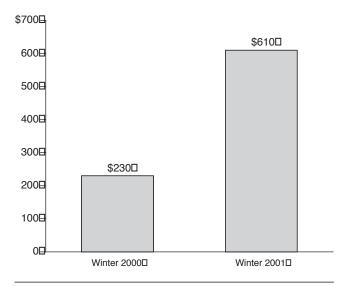
the month of January of this year, and multiplying it by the five months that the Department of Energy considers to be in Winter. For heating cost purposes, the Energy Department considers Winter to run from Oct. 1 through March 1. While I don't believe for a moment the official figure that a California resident will spend only \$610 for five months of Winter of this year heating his home with natural gas—some Californians report spending \$300 for such gas heating for only one month—what is most interesting, is that energy officials claim that the heating cost went from \$230 in Winter 2000 to \$610 in Winter 2001. This is an admission of an increase of 2.65 times.

Many citizens know of multiple price increases, in electricity, in natural gas, in propane, in oil. State Sen. Tom Jackson (D) of Alabama reported that the Bush-allied energy thieves quadrupled gas bills for some citizens in his state, from approximately \$100 per month to \$400 per month. This is causing destruction across the country, from Vermont and Massachusetts to Florida to Washington State.

At the same time, deregulation has set the hair-trigger for collapse of the world financial system through default of California's two largest utilities, Pacific Gas & Electric and Southern California Edison. These companies were charged sky-high prices for the electricity they bought from the Bushallied energy pirates. For reasons of the way the deregulation law was formulated, they could not pass these higher costs for purchased electricity on to the customer (not that we would want them to pass on such high prices!). They have accumulated approximately \$12 billion in debts to purchase the

FIGURE 4D

# Average California Home Heating Cost Using Natural Gas□



higher-priced electricity, on top of somewhere between \$5 and \$8 billion of debt that already existed. They cannot pay the debt and obligations. They can blow the financial system sky high. They owe substantial sums of money to Bank of America, Wells Fargo, and J.P. Morgan Chase banks, as well as to at least two dozen other banks, including Crédit Agricole in France, Deutsche Bank in Germany, and insurance companies, pension funds, the Treasuries of counties in California, etc.

#### **Subsidizing the Pirates**

Now, here comes a critical test for the fight for re-regulation. If you are not willing to fight for it, you will propose stupid and insane measures. So, the State of California has already taken \$400 million from the Los Angeles Water District's Treasury, and used it to buy electricity and sell it, at lower prices, to PG&E and Southern California utilities. What this means, is that the Los Angeles Water District is subsidizing the energy pirates AES, Reliant, and Duke Power, because it is paying the higher costs of energy. Now, the entire state government of California Gov. Gray Davis, even though he knows and has denounced deregulation in quite pointed terms, is nonetheless proposing a short-cut: that the state issue \$10 billion in bonds, with which it will buy electricity from the energy bandits, at the prices charged by the bandits, and sell it at lower prices to PG&E and Southern California Edison so that they can distribute it at a lower price to their customers. This is the same subsidy plan as the Los Angeles Water District, and is money down the sink-hole.

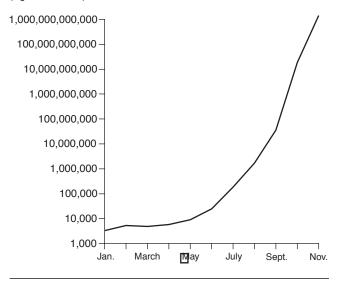
The danger is that the hyperinflation in energy prices will

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FIGURE 5D

# Weimar Hyperinflation in 1923: Wholesale Prices (1913 = 1) $\square$

(logarithmic scale)



not only push up the global hyperinflation, but the two processes become intertwined, sending prices higher and higher to feed the speculative bubble. The hyperinflation was kicked off in a big way in August 1998, when the Russian government declared a moratorium on short-term Treasury debt and categories of corporate debt. This shook the world financial system. On Sept. 23, 1998, the Long Term Capital Management (LTCM) hedge fund failed, with \$1.25 trillion of bad derivatives debts outstanding, which could have melted down the world financial system. Alan Greenspan of the Federal Reserve did two things. He strong-armed 16 banking houses to make a \$3.6 billion capital infusion into LTCM, and then, between September and November of 1998, he cut the Federal funds rate three times, and turned on the printing presses fullforce. A wall of money was sent into the economy, and each time over the next few years that the financial bubble seemed to be failing, including when the stock market melted down last year, Greenspan threw money at it.

The fundamental problem is this. When the rate of increase of monetary aggregates—basically, the money supply—becomes greater than the rate of increase of financial aggregates, representing the financial bubble, which the money pumping is supposed to hold up, a boundary condition is crossed, and a Riemannian shock wave front is generated, of hyperinflation. This is what happened in the Weimar Republic in Germany, between March and November 1923 (**Figure 5**), and this sent prices out of control, and destroyed the economy.

Now, this is the danger of what could happen. If price

increases of three, four, or ten times are pushed through, then what happens to the economy? The fact that deregulation was pushed through in California is not accidental. It is not only America's most populous state, with 35 million people, but it is entirely energy-intensive in its agriculture and manufacturing. California is a test-tube case for deindustrialization, and this will have effects across the country.

Consider California's agriculture. A lot of it is irrigated, such as in the Imperial Valley, which used to be a desert. By water infrastructure and irrigation, it was turned into the largest vegetable-growing region in the country. But water infrastructure and irrigation take a lot of energy. California is the nation's largest agricultural producer. In 1989-91, it produced the following percentage of the nation's output of the following crops: almonds, 100%; prunes, 100%; pistachios, 100%; olives, 100%; walnuts, 99%; nectarines, 97%; grapes, 91%; broccoli, 90%; processed tomatoes, 90%; plums, 85%; avocados, 83%; lemons, 81%; strawberries, 78%; safflower, 77%; lettuce, 75%; celery, 73%; peaches, 66%; carrots, 58%; asparagus, 43%; alfalfa seed, 38%; oranges, 34%, and so forth. It is also a large producer of milk, rice, and cotton.

California is also the nation's largest manufacturing state. One out of ten of America's 18.4 million manufacturing workers is employed in California. In October 2000, California had a manufacturing workforce of 1.93 million workers, which is nearly twice the number of manufacturing workers of the state with the next largest manufacturing workforce, Ohio.

#### The Spread of the Effects

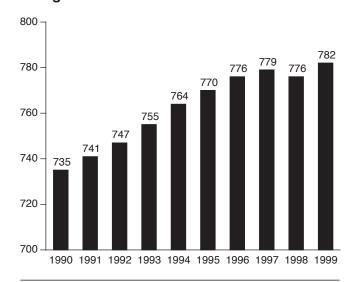
As the effects of the process spread, a few points follow. First, the energy price increases were imposed on an energy grid that was underdeveloped and/or broken down. **Figure 6** shows installed U.S. electric generating capacity. It shows that in 1990, the United States had 735 gigawatts of installed generating—a gigawatt is a billion watts. It rose slowly to 771 gigawatts of installed capacity in 1999, the latest year for which data exist. However, this did not keep up with bare population growth, as is shown in **Figure 7.** In 1990, the U.S. had installed generating capacity of 2,956 watts per citizen; in 1999, the U.S. had installed generating capacity of 2,862 watts per capita. Thus, this is a fall of 3%. We estimate that between 1990 and 1999, installed generating capacity in California fell 7-8%.

Under the constitutional concept of the General Welfare, energy is not just one among several commodities to be traded, by a bunch of gamblers. It is a critical element of infrastructure; in specific, it is an organized flow that helps transform the economy to higher and higher forms of power and efficiency.

Thus, whether energy generation is publicly or privately owned is not the issue, or whether someone makes a profit from power production—provided it's reasonable—is not the

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Installed U.S. Electric Generating Capacity, ☐ in Gigawatts ☐



Source: Energy Information Administration, U.S. Department of Energy.

issue. Whether under public ownership or under private ownership for profit, it must be used for the General Welfare, to advance the economy, and thus be under regulation to ensure that that happens. Given the vital role of energy, there must be no compromising with the need for regulation. Thus, Mr. LaRouche's call for re-regulation has particular urgency: We must re-regulate the utility industry in California and across the country. This also requires the application of Chapter 11 bankruptcy procedures, where appropriate, to utilities that have been burdened with debts from the California deregulation debacle. Any utility that had debts illicitly imposed on it, must be freed from the debts, through Chapter 11 bankruptcy reorganization, so that it can return to its principal job of getting electricity to the economy.

This is a cutting-edge task, which we must keep our focus on. This is not to take away from the crucial responsibility to build up the production of power plants and other energy infrastructure. For the past 30 years, Mr. LaRouche has written development programs for power development, for infrastructure development, for the United States and the world. However, first, to create the conditions to realize all that must be done, we must break the stranglehold of the energy thieves like Enron and Reliant, and the policy of deregulation, which is the principal cause for the energy crisis.

### **End of the Importer of Last Resort**

[Freeman's speech concluded with the "importer of last resort" relationship, by which America sucks in huge quantities of physical goods from the world's nations, extending FIGURE 7E

# Installed U.S. Electrical Generating Capacity, in Watts Per Capita□



Source: Energy Information Administration, U.S. Department of Energy; U.S. Department of Commerce.

from clothing and stoves, to the machine tools that it needs for bare survival; and many nations, including Mexico, Japan, and China, are extremely dependent on the U.S. market for their exports.]

The game is over. The ending of the "importer of last resort" will simultaneously bring on a U.S. and world production crash, and a world financial breakdown. Think of the interconnection of the ending of the "importer of last resort," to the energy hyperinflation. Think of losing imports, and the resulting spiralling downward of the U.S. economy. Then, insanely, in the middle of that, jack up energy prices 400, 500, 5000 times. This is a total recipe for destruction. When Lyndon LaRouche said that we are in . . . the biggest financial and economic breakdown in 300 years, there is not a single scintilla of exaggeration. That's reality. There are no shortcuts, like the one that Gray Davis tried in California. This is the time for LaRouche's scientific method.

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