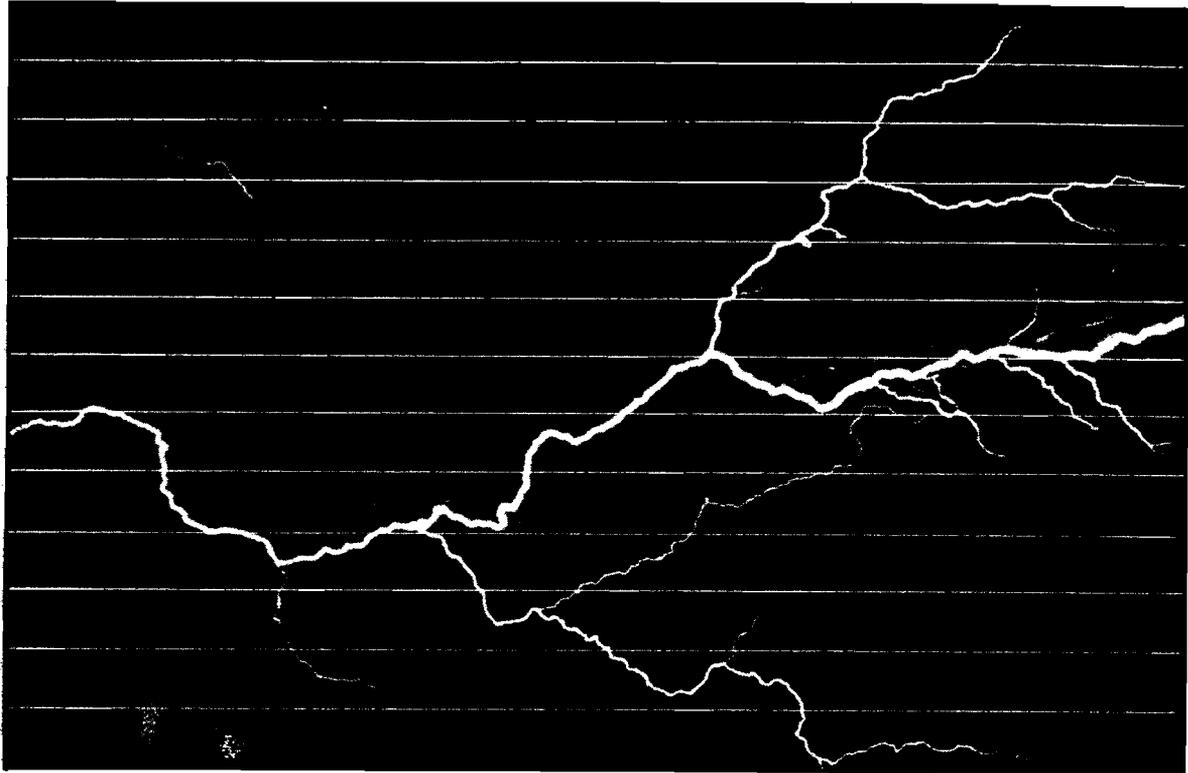


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ENOUGH ENERGY: ZARB'S WAY

"It remains to be seen when the United States government will realize that its most significant contribution to the American people is to know when to get out of the way."

by Frank G. Zarb

The making of an energy crisis

During the early 1960s the United States was a net exporter of energy. As domestic production of oil and gas began to show signs of decline, we faced two options: The nation could protect domestic industry to achieve maximum production of oil and gas and begin the transition to substitute fuels. Or it could expand

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imports of relatively cheap oil from Mideast and other producing areas. The choice we finally selected was, obviously, the wrong one. It is fruitless to attempt to fix blame or to spend too much time considering what would have happened if the first course had been followed. We are where we are. We went from zero imports to importing 40% of our oil requirements in a little over 10 years. The United States pays \$14 per barrel today as compared with the 1960, \$1-per-barrel level. Our imported oil bill for 1971 was \$3 billion. It rose to \$27 billion in 1975, \$34 billion in 1976. This year it will climb beyond \$40 billion! In addition, we have learned that the flow of oil from abroad can be stopped for political reasons. The national security implications of this condi-

tion are indeed worrisome. So there you have it . . . an energy crisis that we, as a people, were partially responsible for. But now what do we do about it, and over what span of time?

There are only six steps available to the United States, all of which must be taken in order to reduce our imports to an acceptable level within the next 10 to 15 years. They are:

1. Reduce the current growth rate of our energy consumption from a historical 3½ percent a year to something close to 2 percent a year, through conservation.
2. Double American coal output in the next 10 years.
3. Maximize production of American oil and gas.
4. Double electric power generation from nuclear plants.
5. Increase Federal spending for energy research and development and ensure the best possible environment to encourage maximum private sector spending for R&D.
6. Complete a one billion barrel crude oil stockpile program to protect the nation from the effects of another embargo.

Accomplishing these six tasks will require a substantial commitment of capital, technology and manpower. However, the real obstacle to achievement is not money, is not technological lag, is not lack of available skilled workers. If the job is not done, the reason will be that the United States government, in its attempt to manage a solution, has stifled free market forces.

The role of government

While government must be concerned with an ever-expanding number of factors in the international energy arena, and, furthermore, must deal with social dislocations in an economy experiencing rapid price increases in energy, its major contribution to solving the crisis would be to eliminate Federal controls over domestically produced oil and gas. It is absolutely clear that the single most important step that must be taken toward energy self-sufficiency is the elimination of government in determining the market prices of U.S. energy. We must price all oil and gas at real replacement values.

The real energy price of a barrel of oil or a million cubic feet of natural gas is whatever it will cost to replace them once they are consumed. Since production of both oil and gas in the United States is declining at a very rapid rate, we are forced to look to foreign producers. Price-controlled domestic crude oil is capped at an average of less than \$9 per barrel. When we use one of those barrels, it costs more than \$13 to replace it. With

natural gas, the real price-to-replacement value ratio is even worse. Once consumed, a unit of natural gas (price-controlled at an average of slightly more than \$1 per million cubic feet) must be replaced with imported oil, since adequate amounts of foreign natural gas are not available to our marketplace. Therefore, expressed in barrels of oil, United States natural gas is price-controlled at approximately \$6 per barrel and replaced at more than \$13 per barrel. United States crude oil has been under price controls since 1971, and natural gas has been regulated for a much longer period. The lesson is plain.

Conservation

Reducing the rate of growth in energy consumption from 3½ to 2½ percent annually—without restricting economic development—is an enormous task, which may take 10 to 15 years to accomplish. Unless the marketplace sees real prices for energy it will continue to get all the wrong signals. Artificially suppressed prices do not reflect valuable commodities and they retard the process of lowering energy consumption. But if price controls are removed and *real* prices prevail, homeowners will make the right insulation decisions; automobiles and appliances will become more efficient in the face of consumer demand; and factory managers, in an effort to protect their profits and competitive positions, will change their processes to use less energy per unit of output.

Some in the government still believe just the opposite—that more Federal regulation should be used to throttle energy consumption. Not only is such a philosophy doomed to fail but it is inconsistent with the principles of a free society that intends to remain free. When a government controls the use of energy through mandate, it is managing the economy's most fundamental commodity, and, therefore, managing the economy. There is absolutely no evidence in the history of the United States or, for that matter, anywhere in the free world that such an approach will work. On the contrary, there is ample experience to demonstrate that controls will only make a bad situation worse. Years of oil and gas price controls have brought us continued declines in domestic production, increases in consumption—and the resultant higher level of oil imports.

Oil and gas

In his recent message to Congress, President Carter said that while Americans would pay "decontrolled" prices for all oil and gas, he was not in favor of removing controls. This appears to be a major contradiction, but what the President really was saying was that he

would not allow the oil and gas producers to benefit from the new higher prices. In a subsequent fact sheet the White House outlined a complex formula that would increase revenues to some producers under certain conditions. Privately, several Carter advisers have indicated that the President understands the need for full decontrol, but this was not the politic time to say so. That's too bad, and wrong, since this is the ideal opportunity for the President to "tell it like it is," with all the cold, hard facts. New revenues will be needed to invest in more research, exploration, development, refining and energy transport systems. To the extent that these revenues are required for investment in American energy, American producers should receive them. It makes little sense to pay foreign nations \$40 billion this year for oil when we could be using a portion of that to put our people to work producing domestic energy. Increasing United States oil and gas supplies will require development of the outer continental shelf, full production from Alaska, and a return to old oil fields with more expensive equipment to extract tertiary reserves. And more pipelines and increased refining capacity are essential.

The nation must back away from the nightmares of bureaucratic regulations—which may be politically popular but will hurt our efforts to maximize the production of our own oil and gas. We must have full decontrol of oil and gas with a simple windfall tax to correct for extraordinary profits.

Coal and nuclear plants

United States coal mines now yield 600 million tons of coal each year. To make a reasonable contribution toward higher energy self-sufficiency, coal production must be doubled in the next 10 to 15 years.

Nuclear power plants at present provide 9 percent of this nation's electricity. The President's program calls for a doubling of nuclear capacity by 1985.

But energy produced by coal and uranium is now more costly than that produced by burning oil, so there is little economic incentive in the system to promote the needed transition. The best way to guarantee that power plants and industrial facilities speed up conversion from oil and natural gas is to make the favorable economics of such decisions unmistakable. But that won't happen if government insists on maintaining ceilings on prices of oil and natural gas.

New technologies

A number of technologies appear to offer significant potential, but are now only barely getting started. Solar energy, gasification and liquefaction of coal, extracting oil from shale rock, and, ultimately,

nuclear fusion are included among those with great promise. But all of these technologies will require large amounts of capital to become significant factors in the energy industry. The prospect for raising the capital needed to develop these alternative fuels will be substantially improved when it is clear that they will compete in the marketplace against oil and gas that are priced at real values. When a solar energy company, for example, must show in its projections that its product, once fully developed, will be competing with price-controlled natural gas, it will be slowed considerably in its attempt to grow. The same statement can be made with respect to all other emerging energy technologies.

The consumer

Decontrol of the prices of oil and natural gas would obviously result in a "one-time" increase in the rate of inflation. However, it is equally apparent that by allowing our economy to rely more and more on imported oil, we are gradually experiencing the negative effects of higher prices and missing the benefits. To reemphasize the cold figures, the United States paid foreign sources \$3 billion for crude oil in 1971, \$27 billion in 1975, \$32 billion in 1976, and this year we will pay them \$40 billion. Each year the price per barrel of imported oil increases and the percent of imports to total consumption is raised. The result: prices creep higher as more American dollars go abroad and less revenue goes into domestic energy production. It is hard not to conclude that the benefits of deregulated domestic prices far outweigh the negatives. Now we hear that the Administration believes that we do need higher prices, but that the government has the wisdom to set them at some level which they believe will represent a reasonable incentive to producers. That conclusion completely misses the point that real price levels are essential to force a real conservation effort and stimulate domestic production consistent with real world conditions. Anything short of the point will do a disservice to the American consumer.

Some have argued that sharply higher prices induced by replacement-cost pricing would bring new hardship to the individual consumer, especially those with lower incomes. That conclusion is true enough but, by itself, skirts the complete truth. Existing controls of domestic prices have exposed all consumers to fourfold increases in imported energy prices. Lower domestic production has increased our vulnerability to an embargo or other forms of disruption. A new embargo in 1977 would cause substantially more economic deterioration and double the unemployment we suffered during the 1973-74 cutoff. Temporary tax credits and direct assistance programs can and should be used to ease the transition, especially for the poor. But let us drop once and for all the notion



The author with his boss, December 1974.

that price regulation has been a friend to the consumer—*any* consumer.

Where is it all headed?

An analysis of the President's proposals and early Congressional reaction suggests that we are in chapter two of a three-chapter energy story. While some progress will be made during the next two to four years, the body politic does not appear to be ready to face the ultimate truth that maximum use of the free market is the only real road to reducing our dependence on foreign energy sources. We, no doubt, will see an omnibus energy bill out of the House of Representatives by early fall, and a response by the U.S. Senate, which will be more piecemeal, through 1978. When all is said and done, this chapter will end with legislation of only marginal importance. Final legislation to finish the public policy portion of a national energy program will not be passed until after 1980.

It is somewhat heartening, however, to note that the U.S. economy will continue to drive in the right direction in spite of government.

□ Conservation is alive and well, particularly in the industrial sector. Factory managers have already learned

that energy has become a live item on their profit-and-loss statements. Detroit has produced a 1977 model car that is 34 percent more efficient than the 1974 fleet, and, by 1980, miles-per-gallon efficiency will be improved by 50% over 1974. Storm window and insulation contractors have never had it so good. Actually the nation is using one million barrels a day less than predicted for this period, primarily due to conservation that is already under way.

□ The latest count of rotary rigs drilling for oil or gas indicate that we are operating at a 20-year high.

□ Utilities and industrial plants are, more than ever, seriously considering conversion to coal and acquiring captive coal supplies. The reason is simple—you can save money and improve security of supply with coal.

□ More and more private sector companies are cautiously examining investments in research and development in new technologies to bring in alternative forms of fuel.

Yes, the American Free Economy is still alive and well. It remains to be seen not whether but when the United States government will realize that its most significant contribution to the American people is to know when to get out of the way and let the system that has brought this nation to its position of world economic leadership do its job. ■