

The Energy Crisis & How To Solve It

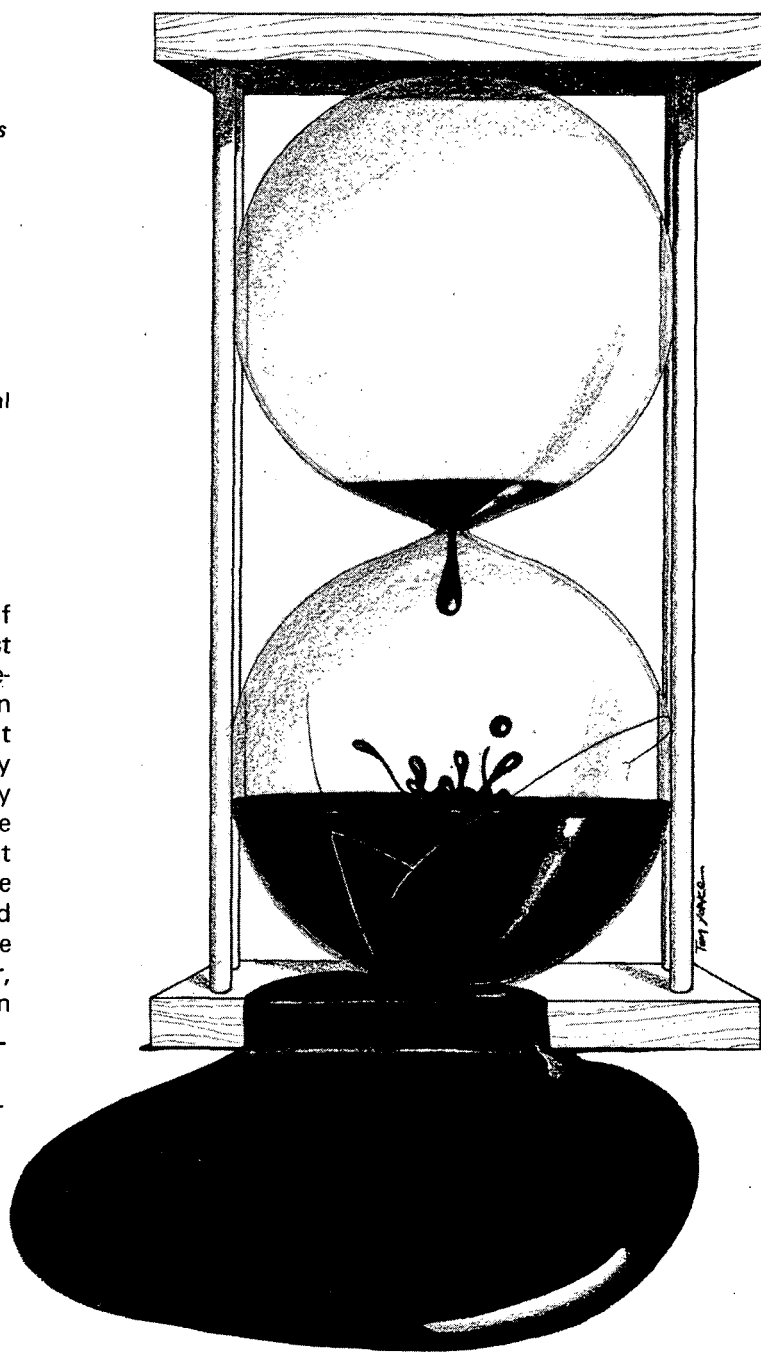
R W Johnson

Recent months have subjected the nation to much debate on President Ford's "energy plan." Briefly, this plan proposes that the Federal Government solve the problems of high oil prices and oil shortages by sharply increasing taxes on oil (thereby raising prices and curtailing supplies). As economist Murray Rothbard pointed out in these pages last month, only the government could propose a plan so ludicrously at odds with reality.

In contrast to Ford's plan to solve the energy crisis with a new dose of taxes, REASON is pleased to present an alternative proposal—one based on sharply reduced taxes and removal of many of the government controls that created the energy crisis in the first place. Consulting engineer R. W. Johnson's analysis of the causes of the energy crisis and his innovative solution are adapted from two chapters of his as-yet-unpublished book-length manuscript on energy problems.

Engineers understand the destructive effects of government energy mismanagement better than most people because they understand the type of cause-effect relationships involved in *servo systems*. When the time interval is long between an act and the result of that act, control and regulation by human agency is very difficult, if not impossible. It is entirely likely that exactly the wrong things will be done, because the effects of prior errors are not yet noticed, or at least are not correlated with the prior errors. A stable servo system is one which seeks an operating level and stays there even with disturbances. An unstable one swings wildly between one extreme and the other, even with small disturbances. A simple example of an

R. W. (Bill) Johnson is a registered professional engineer, in private consulting practice in California in electronics, communications and electrical engineering. Mr. Johnson received his BSEE from the University of California in 1943, and for some years worked for one of the leading architectural-engineering firms which specialized in refinery design and large energy projects. He has had graduate training in business management, electronics and law, and has been in senior executive positions in three companies.



unstable servo system is a dual-control electric blanket with the control plugs interchanged, unknown to either occupant of the bed. Relatively stable systems are those found in nature, the natural checks and balances that keep any population from becoming excessive.

With cause-effect relationships having long observation times, control of an unstable situation by human agency is difficult, if not impossible. To understand how past errors of government have operated in this fashion, and how presently offered solutions by both political parties merely continue this misguided pattern, we want to present a few specific examples.

FEDERAL POWER COMMISSION

The Federal Power Commission (FPC) was created in 1920 by the Federal Water Power Act. Then, its perfectly reasonable purpose (Perfectly reasonable, that is, if one accepts the idea of government ownership of lands, waters, and power projects at all. If the government is the owner, then it is natural for it to select a manager.) was to manage hydroelectric power projects on U.S. Government lands or on navigable waters. In 1930 the FPC became an independent commission. By the Public Utility Act of 1935, during the first Roosevelt administration, it was handed jurisdiction over the transmission and sale at wholesale of electric energy in interstate commerce and over the utilities so engaged. By the Natural Gas Act of 1938, the FPC gained jurisdiction over transportation and sale of natural gas in interstate commerce and over the gas companies engaged therein. In 1953 by Executive Order 10485 the FPC gained control of certain functions relating to the transmission of electric energy between the U.S. and foreign countries, and over export and import of natural gas.

Natural gas companies in interstate commerce are required to file schedules showing the rates charged for any transportation or sale of natural gas, to substantiate those rates, and they may not change such rates or charges without FPC approval. Certificates of public convenience and necessity must be obtained for all construction, operation, extensions and acquisitions.

FPC began to regulate natural gas prices on an area basis around 1954, in its Philips decision. Industry objected to the rates as unreasonable and went to the courts. Almost 10 years of litigation ensued; in May 1963 the U.S. Supreme Court, by a 5-4 decision with sharp and strong dissent, declared that the wellhead price of natural gas was subject to FPC regulation. In September 1964, the FPC broadened its control by a landmark decision on rate-making in the Permian Basin area of West Texas and southeast New Mexico, which established ceilings on gas from various types of wells. Again, there were court challenges, but in December 1965, the U.S. Supreme Court ruled once again that the FPC had the authority to fix the starting price at which natural gas could be sold.

In 1966, Ralph Nader began attacking natural gas pipelines as less safe in rural areas, which by then had been built up. Congress dutifully reacted, and in 1968 the Office of Pipeline Safety was established and placed under the U.S. Department of Transportation with authority over pipelines for natural, flammable, corrosive, or toxic gas. The FPC retained approval control over new pipelines. In 1968 it approved the Great Lakes gas pipeline from Canada, through the U.S. midwest and back to Canada. This was attacked in the courts and delayed.

In 1968, after three years in the courts, the FPC established prices on a *wide-area basis* and required producers to lower their rates and refund some \$68-million (including interest) to pipeline companies for above-ceiling prices charged between 1965 and 1968. Even the Internal Revenue Service got into the act at this point by disputing the right of the gas producers to claim a refund in Federal income taxes as a result of the refunds the FPC forced them to make!

Then in 1969 came a major blow not only to the natural gas industry but to all of the energy industries. Congress decided that the "depletion allowance" was a "tax loophole" that had to be closed. Senator Kerr, the powerful infighter from Oklahoma was dead by then and the move succeeded over his dead body, as he had often said it only would. The depletion allowance was decreased from 27.5 percent to 22 percent as part of the "tax reform bill" of that year. The depletion allowance is under further attack at this moment, both in Congress and in some of the energy-producing states.

This was a reversal of long-standing policy of encouraging new exploration and prospecting by recognizing that mineral and energy resources in a given area are not inexhaustible. The depletion allowance in effect exempted from taxation a portion of the income derived from wells and mines—the equivalent of depreciation, treating the resource as a capital asset. This had a beneficial effect during the many years it was law—since 1957 and at late as 1964, the oil industry had been complaining about a *surplus* of oil, an over-supply, and cried out for import controls which the government dutifully enacted. A mandatory import control policy was established by executive order in 1959. In 1964 there was still more industry pressure for import restrictions and a protective tariff, to which the government responded. And now, but for quite a different reason—this time the threat of an inflow of petrodollars from abroad sufficient to buy up banks, ailing airlines (also suffering from government mismanagement) and businesses in trouble—we once again have the bureaucratic urge to control, either by arbitrary taxation or by further limiting of imports.

THE DEFICIT BEGINS

The combination of unrealistic pricing of natural gas by the FPC and the reduction in the depletion

allowance by Congress had the predictable effect: new exploration fell off and we began to use more natural gas each year than we added to our reserves by discovery. The effect had begun even in 1968, which was the first time in history that our consumption of natural gas exceeded that added to reserves. The deficit was about a trillion cubic feet (1 Tcf). Proponents of FPC pricing pooh-poohed this, saying it was only temporary and not to worry about it. The only thing was, it continued year after year while the FPC went blissfully on enforcing its destructive policies.

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In 1969, again after some seven years in the courts, gas producers in the Hugoton-Anadarko area of the Texas Panhandle, Kansas, and Western Oklahoma also surrendered to the FPC and agreed to reduce natural gas prices by \$6.1-million per year and to refund \$47-million to customers. This area produced about 19 percent of the interstate natural gas at that time.

Some of the rate-making decisions of the FPC have been grossly unfair. In the words of one of the consistent dissenters, vice-chairman Rush Moody, they have amounted to “regulatory capriciousness.” Take, for example, the denial of permission to Tenneco Oil Co. of Houston to sell five million cubic feet of gas per day to Northern Natural Gas Co. of Omaha. The proposed base rate was 47¢ per thousand cubic feet, but the FPC insisted on a ceiling rate of 21.5¢. (Based on heating values of 5,675,000 BTU/bbl for petroleum and 1031 BTU/cu ft for natural gas, 47¢ per thousand cubic feet is like \$2.59 per barrel for petroleum, which, by the FPC reasoning, is 2.19 times too high!) The day before, the FPC had granted two emergency *import* authorizations at \$1.50 and \$1.54 per thousand cubic feet. The Tenneco-Northern decision did not save consumers any money; as soon as the FPC denied its permission, Tenneco sold the gas at a higher price in the *intrastate* market where the FPC had no jurisdiction. Northern had to buy its gas elsewhere and also paid a price higher than the 47¢ Tenneco had proposed.

Finally, after several years of a steady decrease in U.S. natural gas reserves and a virtual elimination of new customers (such as electric utilities seeking to shift away from coal) the FPC relaxed pricing regulations in 1972 and also allowed imports of liquified natural gas (LNG) from Algeria and elsewhere, but only under so many restrictions and

stipulations that it seriously encumbered this possible source. In 1973 the FPC abolished gas price ceilings for six months; during this period purchases amounting to 145 billion cubic feet were made at an average price of 53.92¢ per thousand, several cents below the unregulated price of *intrastate* natural gas and still, on a heating value basis, equivalent to only \$2.97 per barrel of petroleum. But in spite of this clear manifestation of the power of the free marketplace to control prices, the FPC continues to regulate.

There were many other attacks on natural gas. In 1972 the U.S. Supreme Court forced El Paso Natural Gas to divest its holding of pipelines, acquired some 15 years earlier in a merger with Pacific Northwest Pipeline. The decision was based on antitrust aspects, but the end result was to force still higher prices on consumers due to the increased overhead of the split-off pipeline company. Again in 1972, the Court upheld the FPC's right to *allocate* natural gas between industrial and home use, the result of which has been less natural gas for utilities. The bureaucracy naturally favors, in any allocation program, the homes over the industrial users, because the homeowners vote. Never mind that this policy means higher prices for electricity and shortages of gasoline—the homeowner isn't smart enough to figure that out!

Concomitantly with all of this, pressures were exerted on fuel users, especially electric power plants, to cease using fuels containing even a small amount of sulfur. In May 1966, New York City tightened up on a law already in effect requiring a reduction to 2.2 percent sulfur content by October 1969, to require this instead by October 1966, dropping to 2 percent by 1969, and 1 percent by 1971. This same sort of legislation was passed all over the country, forcing the utilities into natural gas (which they couldn't buy) and low-sulfur oils (competing with the automobile and home heating oil) and away from coal.

And the FPC delayed for several years a much-needed pipeline to furnish southern California with an increased natural gas supply. In its booklet, “Edison and the Environmental Crisis,” Southern California Edison Company complained, “We waged a ten-year campaign to import more natural gas to California, but the Federal Power Commission denied the request.” Finally, in 1969, the FPC approved the \$118-million pipeline to carry El Paso Natural Gas products from Texas to southern California. But then, the environmentalists took over and attacked the project in the courts.

Unreasonable acts by the FPC have in effect weakened one of the two major competitors to petroleum, natural gas. Concurrent acts by well-meaning environmentalists have weakened the other major competitor, coal. The natural stable servo system that results from competition in a free market place—at least competition in the choices available to consumers—has been seriously disturbed by government intervention of precisely the wrong type. The result is that the system has become *unstable*, unmanageable.

The great tragedy is that not realizing this, or not caring, people now push for still more government intervention when what we really need is less! Control the price of any commodity and either its price will increase or it will vanish from the marketplace. The *market itself* is the best possible regulator of prices. FPC bungling has been a major factor in the energy problems we have today.

ELECTRIC POWER

Electric utilities find themselves accountable not only to the FPC and to innumerable state and local governments all heaping regulations upon them, but to the Atomic Energy Commission (recently renamed the Nuclear Regulatory Commission) when nuclear plants are involved. The AEC for a number of years was fairly liberal in granting licenses for nuclear power plants. Indeed, in a forward-looking step in 1964, the AEC began to sell, rather than lease, fissionable material for power-plant use. The delays in plant construction in those days were mainly delays in deliveries, construction schedules, and start-up problems—all largely due to the newness of the designs. But the AEC kept tight reins on the all-important *breeder reactors* and vacillated for nearly *six years* before going ahead with the first commercial breeder reactor, long after breeders had been built, operated on line, and proved out in England and the USSR.

The state of the art in 1968—possibly as early as 1965—was sufficient to have built a large breeder for testing. The British did it; they leapfrogged into a 250-megawatt breeder at Dounreay and achieved full operation by 1972, and also completed the PFR breeder at 600 megawatts. The USSR had their BN-350 combined electric-power and desalting plant at 1000 megawatts completed in 1971 and in operation during 1972.

But the AEC fumbled along, partly due to a melt-down that occurred in the Power Reactor Development Co.'s sodium-cooled Fermi-1 breeder reactor in Detroit in 1966, but mostly because of playing a waiting game to see who would pay for the breeder, industry or the taxpayers. The Clinch River breeder plant was placed in contract as a joint government-industry venture January 25, 1974, but will not be operational until 1980. It will be capable of only 350-400 megawatts electrical output. (Meanwhile, Fermi-1 has been shut down permanently due to severe technical and design problems.)

The breeder reactor is of vital long-range importance because it is a more efficient user of uranium than any of the existing so-called "thermal reactor" designs. Uranium is used in its construction and eventually through neutron bombardment becomes plutonium, which is fissionable and can be used to power other breeders. The reactor produces more fuel than it uses, except that it takes from 10-30 years to do this. (The uncertainty in this "doubling time" is because there is not yet enough operating time even

with British and USSR reactors to prove the theory. Some theoretical optimists hope for a doubling time of only 5-10 years, but the weight of opinion is toward the 30-year figure.)

In 1971, the AEC began delaying all nuclear plants licensed for construction since 1969, some 90 plants in all. It required them to submit environmental impact reports taking from several months to over a year to prepare. Industry warned of power shortages if the new capacity could not be completed on schedule. Now the power shortages have indeed developed.

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Under attack by environmentalists often mistaking the steam from a power plant for smoke, worrying about the ecology of ocean wildlife due to temperature increases in the water around the plant, concerned about possible explosions and especially nuclear explosions and radiation, public utilities faced an uphill battle in their efforts to increase their production capacity of both nuclear and conventional power plants to meet the demand which they correctly predicted was coming. Their projections were ridiculed as unrealistic and their stated needs refused. They were charged with simply trying to fool the public. Indeed, as late as 1963 private electric utilities were pushing all-electric homes—remember the "Medallion Homes"? Critics pointed out that the utilities should not be advertising to increase use of electricity if they couldn't supply it. In this criticism they were probably right, but that doesn't alter the plain fact that with an increasing population, especially in the under-30 age group making new homes, electric power needs will increase regardless of advertising, even the "save electricity" advertising now going on.

COAL

In coal, we see much the same thing occurring, although less dramatic and more subtle. The production per man-day is decreasing. Concerns about the safety of coal miners in this inherently high-risk occupation led to over-reaction by Congress. The 1969 Coal Mine Health and Safety Act closed many mines for substantial periods of 1970. There developed a shortage of labor, and of railroad cars to transport the coal. In 1970 utilities still using coal faced a virtual famine; the TVA had to reduce to a 10-12 day supply of coal rather than a normal supply

of 60 days. More utilities began switching to residual fuel oil, but refineries had reduced the output of this in order to produce enough gasoline to keep up with the demands of automobiles, by then equipped with antismog devices lowering their gas mileage 15-20 percent. Who would have believed someone in 1969 if he had predicted that the Coal Mine Health and Safety Act would cause a shortage of gasoline for automobiles?

Resorting to surface mines to improve safety, coal operators were then attacked by environmentalists concerned about the scars left on the landscape by strip mining. Promises to rehabilitate the land fell on deaf ears. The coal unions complained about safety, wages, fringe benefits and working conditions. A coal shortage developed, not from any lack of resources but from the lack of ability and/or *incentive* to produce.

The *basic* problem with coal, of course, is that only about 2/3 of the coal reserves are low in sulfur (one percent or less sulfur). Most of the coal is used in the East but only 1/3 of the reserves are in the East, and of these, only 1/5 are low in sulfur. Thus transportation becomes a problem and a shortage of railroad cars to transport from the west to east developed quickly as the regulations reducing sulfur began to be widespread. Enter other villains—the regulators of the railroads—with pricing policies and featherbedding, to inhibit efficient *transportation* of coal. The bunglers never thought of all this when they reacted to environmentalist demands in the first place.

Coal can be de-sulfurized, but only by processing it—converting to coke, liquid hydrocarbons and gases. General Motors has a successful process working in Pontiac, a double-alkali process. De-sulfurizing coal, and making new fuels from it by hydrogenation, takes new thinking in a modernized technology. *In situ* processing, where coal is converted while still in the ground, without mining it, has considerable promise. But to get these things done rapidly means that strong *incentives* must be available; more government financing of pilot plants is not going to solve the problem.

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PETROLEUM

Over the last 40 years, petroleum has probably been subjected to more government regulation and meddling than any other energy source. Pick up any

issue of the *U.S. Government Organization Manual* and count literally dozens of agencies all concerned in one way or another with regulating the petroleum industry. From the import restrictions in the post-war period, the U.S. Government moved into import encouragement in the 1960's and 1970's, while at the same time it made it more difficult, expensive, and less profitable for the oil companies to locate, tap, transport, store, and refine domestic oil. Now, having succeeded in almost demolishing domestic production incentives, the government now proposes to return to a policy of limiting imports by one means or another to avoid unacceptable trade deficits.

Opponents of off-shore drilling have banded together, particularly in California, fighting protracted legal battles against continuing to tap the immense reserves of oil and natural gas under the Continental Shelf. Proposals to build new refineries have been denied, new pipelines and storage tanks turned down. The last new refinery in the U.S. was completed in 1969. Every time a fuel truck overturns and burns on the highway there is renewed pressure to cease shipment of fuel by truck. (Complainants fail to produce any alternative—are we to have pipelines or railroad spurs into every gas station?)

WHAT DO WE DO?

The foregoing are just some of the most flagrant examples of government intervention and meddling of precisely the wrong type in energy. Running through all of this it is clear that there is one *central* problem: the possibility of people with obstructionist motives attacking a project in the courts even though it has been approved by those agencies which have, through the Congress, been set up to manage these things. Not only has the government imposed delay after delay by setting up the agencies themselves and their myriad of rules and regulations, but they have also given to anyone the power to attack those agencies in the courts and automatically tie up any project for as long as it takes to have the matter adjudicated, appealed, and decided. That the plaintiff in such suits is not himself injured is no longer important.

The *real culprit* in all of this is the “sleeper” in Senator Jackson's National Environmental Policy Act of 1969, which was a little-noticed clause directing Federal agencies to file an environmental impact statement before taking any action that might affect the environment. By inference, this also applied to businesses under the jurisdiction of those agencies. This clause gave activist groups legal standing, for the first time, to challenge in the Federal courts the business-regulating actions of Federal agencies. Before Senator Jackson's cleverly worded bill, ecologists could not, for example, sue the Department of the Interior to stop it from selling a Federal land lease to an oil company or grant it permission to build a pipeline through Federal lands. They could not allege damage to themselves, so they had no standing in

court. But under Senator Jackson's bill—which was swept out of committee and through Congress after the Santa Barbara oil spill on a tide of emotion and misinformation with virtually no opposition—*anyone* (even a Russian agent) by posting a \$100 bond could bring suit in Federal court to stop a Federal agency from granting business operating license, permits, leases, use of public highways, or building permits. All the plaintiff has to allege is that the agency did not file an *adequate* environmental impact statement before allowing the business to proceed. The Sierra Club rejoiced!

Nearly every single delay in the energy area in the past several years has been because of Senator Jackson's bill. The regulatory agencies in some cases have even encouraged such suits, because then they could say they were working under direction of the court in doing whatever they did, which usually turned out to be delaying. The delays in off-shore leasing, off-shore drilling, nuclear power plants, fossil-fuel plants, energy storage systems, hydroelectric expansions, coal mines, use of coal, transmission lines, and even in geothermal power and shale-oil leasing, are all directly traceable mainly to this single clause.

If we must single out any one individual in this country who is more responsible than any other for the energy mess, it has to be Senator Henry M. Jackson, Democrat from the State of Washington. And in 1973 when the fuel crisis had reached a point where the public became concerned and the polls indicated it was more of a concern than even Watergate or inflation, it was none other than Senator Jackson who said, "I think it's outrageous we can't import oil from Alaska." And now the press bills him as the congressional "energy expert," and he once more announces that he is running for president.

But we must remember that no bill becomes Federal law without the vote of the Congress and either the signature of the President, a failure to veto, or an over-ride of his veto. The most important action we can take right now is to amend, at the very least, or preferably repeal in its entirety, the National Environmental Policy Act of 1969, and replace it, if we must, with something more rational that takes into account the perils and booby traps that may exist and limits accordingly. If we continue to permit anyone with \$100 and the inclination to do so to tie up our energy producers for years in court battles, we will collapse as a nation. By the time the power and heat go off and the transportation stops, and our industrial machine grinds to a halt, it will be too late.

The basic problem is not one of shortage of resources or giving out of supply, or of international extortion. The basic problem is that control and regulation have become *ends in themselves*. We have developed sort of a Pavlovian response to every problem: pass a law and regulate or control it. The trouble is that *we start a chain reaction that we cannot control* when we meddle with the production

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and price of energy. The American economy is far too complex a servomechanism with too many feedback loops and cross-couplings to be tinkered with in this way.

The natural gas producers are told they must reduce their prices and when they warn of scarcity people do not listen. The scarcity develops and for years nothing is done about it. We make unreasonable rules for the laudable purpose of controlling our environment without thinking through the problem, without making a competent analysis of the trade-offs involved, and without seeing the consequences of making it possible for anyone to attack the studied decisions of the agencies set up to make them. We block the efforts at production of more domestic oil to make up for shortages by stopping off-shore drilling, by delaying the Alaska pipeline, by refusing supertankers access to U.S. ports, and by refusing permission to build new refineries. We demolish the tax incentives already proved to be beneficial to production. Then we do things that increase the consumption of gasoline by 125-million vehicles simply to benefit temperature-inversion stress areas accounting for only a few million vehicles. And even then, we produce no data proving that there indeed has been any benefit at all even to the inversion areas, from either the controls on vehicles or on the sulfur content of fuels. Have you ever wondered why it is, with some 80 percent of the cars effectively "removed from the road" in terms of their emissions, and on a nonbusiness day with light traffic, that smoggy days in Los Angeles seem just as bad as they used to be?

And, as though this would help matters, people insist on more conservation, lowering speed limits to save a questionable 1-2 percent in gasoline consumption at the expense of possibly a 10-15 percent decrease in the product of commerce simply due to the longer time it takes to transport people and products. People forget that price inflation is caused not only by higher energy prices but by financing government deficits, most recently by the records set during the Nixon years. Now the government proposes deficits more than twice as large as any previous figure, coupled with still higher energy prices, in the mistaken belief that recession is not the end result of inflation.

Taken all together, it is as though the American people are expressing a death wish, a collective form of mass suicide. Energy producers find their paths blocked in every direction—in production, distribution, transport, import, improving efficiency of present facilities, and in making a profit high enough to support the tremendous new investment required—some \$350-billion necessary in the oil industry alone to locate new sources and obtain new production. Studying the energy history of just the past 30 years leads inescapably to one conclusion: OUR SHORTAGE IS NOT OF ENERGY BUT OF COMMON SENSE!

The multitude of agencies, control commissions, study groups, lawyers, courts, bureaus, and the Congress itself more often than not are working directly at cross-purposes; they are not solving the problem, they *are* the problem! The Senate of the United States is a fine group of dedicated, honest, courageous, sincere, intelligent, and able people—with 90 or 95 exceptions! And now that same Senate is acting to impose still more controls, more regulations, more taxes, and launch more investigations, turning completely away from the heart of the problem which is too much government interference in the

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first place. There *MUST* be a better way, and I am convinced there is, if we have the courage to demand it and try it.

A BLUEPRINT FOR ENERGY SURVIVAL

By the end of 1973 and in early 1974, there was probably nothing more talked about than the energy crisis. Even Watergate was pushed off the front pages for a time. A Gallup poll reported that energy had replaced inflation as the problem most worried about—46 percent in early 1974 listed energy as their major concern, and only 26 percent still listed inflation. Earlier, in September 1973, 70 percent were more worried about inflation.

Then, as the Agnew resignation, the Ford appointment, the historic Nixon resignation, his pardon by Ford, and the Ford appointment of Rockefeller as Vice-President came along in what seemed to be rapid-fire order leaving many people sputtering angry, others bewildered, and still more wallowing in their same blissful euphoria, the lines at the gas pumps shortened and disappeared, energy czar Simon returned to the money field he knows best, and the public began to forget about energy and turned its attention to the raging inflation brought on by several years of \$20-\$30-billion deficits and high prices for imported oil. The many unreasonable requirements on automobiles in the name of safety and clean air, combined with gasoline prices and inflation, caused a disaster in the auto industry, sending recessionary shock waves throughout the economy that are now approaching a tidal wave, threatening us with a complete economic collapse due to a continuation of the false policies of the past.

The *National Review Bulletin* in its February 22, 1974 edition published an article on "How to Cure

Gasoline Indigestion" by pointing out that if we wanted to "change the greedy old oil business into another efficient, cost-conscious regulated industry like the Post Office or Amtrack" this would be exactly the way to do it: make things so bad that anything would seem an improvement.

John T. Wheeler of the Associated Press prepared a thorough and frightening review of the energy situation, which was widely published in the Sunday supplements of newspapers on January 13, 1974. In it, he likened the energy problem to another link toward George Orwell's ugly world of 1984, remind-

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ing us that we had but 10 years to go. Wheeler quoted many "experts" in the field:

Brookings Institute Official: *What we are seeing now with energy is not a bad winter cold, it is the forerunner of pneumonia.*

Maurine H. Stans while still Secretary of Commerce: *The American society has been woefully weak in anticipating its troubles, and sorrowfully lacking in common sense in coping with them.*

John Markley of Stanford Research Institute: *It is almost impossible today to follow events, let alone get ahead of them. There is so much now we can't handle. It's a decision overload, crisis shock, the inability of managers to manage, leaders to lead.*

John McCloud of Simulation Councils, Inc.: *Computer models show everything going to hell in a handbasket if we make the same sort of decisions as we did in the past.*

And yet, according to Wheeler, there is strong sentiment for doing just that—making the same sort of decisions we have in the past. Wheeler quotes Allen V. Kneese of Resources for the Future, Inc., as worrying about present nuclear power production and dangers of deadly accidents, urging that we phase out present nuclear power generation as soon as possible. Wheeler calls attention to the many calls among "futurists" for the government to take over the energy field, particularly oil, while noting the comment by one Federal expert that this probably would provide no long-term answer because "we have

no better track record on such things than private industry."

During 1974, politicians started running scared, and even some of the most deified liberals began questioning whether we were doing the right thing. Henry Kissinger stepped up his shuttle diplomacy to try to convince the oil producing nations it would be in their own best interests to again lower prices, and simultaneously to convince the oil consuming nations they should band together for collective action. Walter Cronkite wondered aloud about the state of affairs and "cronked" once or twice about the dangers of high energy prices. President Ford gave forth high-sounding rhetoric in his 1975 State of the Union Message, but then proceeded to still larger deficits, still more controls over domestic energy production, and still higher energy prices by taxing foreign imports.

Almost nowhere in the volumes of material published in newspapers, magazines and reports, or on radio and television or in energy seminars and symposia, are to be found statements from those who advocate a free-market solution to the problem. Occasional voices in the energy wilderness calling for a return to a free market in energy are lost in the torrents of words emanating from the "experts" on energy on what to do about it. Senator Buckley came closest to it when he said, "The effect of misguided intervention by the Federal Government on the pricing and movement of energy resources over the past decade or more has produced the shortages we now have."

THE ANSWER

What really needs to be said in clear, stentorian tones is that the real solution to our energy problems lies not only in a free-market approach but in a *completely* free-market approach, without even application of the 16th Amendment. When a businessman establishes a price on his product, he takes into account (1) his cost of materials and supplies purchased from others; (2) his cost of labor which he and his company put into the product; (3) the taxes he must pay to his ever-present partners, the local, state and Federal governments; (4) his selling expenses; (5) his *burden*, which includes amortization and depreciation of his equipment, plant, and facilities; (6) his cost of money, working capital, interest if he borrows it; and (7) his *profit*, normally computed as a reasonable percentage of the sum of all of the preceding items.

Since profit is reckoned on the basis of all of the costs of doing business to arrive at selling price, it is manifestly obvious—although we seldom really think about it—that *the profits of others and the taxes paid by them* are also necessarily included in his costs. Thus, in taking a percentage of his total cost as his profit, he is adding his profit percentage on to the profits and taxes paid by others. Since there may be thousands of businesses involved in the total chain

from raw material to product at the retail store, each takes his profit, and each pays his taxes. Each also pays his *energy bill*. Thus there is a very large *pyramiding* effect on every single thing we buy as consumers. Each person's price is a little higher because of the taxes and energy bills he himself pays. It is higher not only due to the amount of the tax or energy cost, but because he must take a profit on it—his profit is reckoned against *all costs*, including taxes and including energy costs.

“The basic problem is that control and regulation have become ends in themselves.”

This elementary fact of economics escapes many people; they don't think about hidden taxes and hidden energy costs nearly as much as they do about the sales tax paid at the time of sale or the income and payroll taxes deducted from their earnings. Politicians know this, of course, and so it is much easier for them to tax businesses who don't vote than to tax people who do. The people would actually pay far less in taxes if they were taxed directly than when the taxes are levied throughout the production and distribution chain of the products they buy. Politicians would not like this, of course, because it would make them more accountable to the people, who would be more inclined to check up on what their money was used for and veto the things they did not feel were necessary.

Therefore, any proposal to do away with business taxes meets with anguished outcries that we would be taxing the poor who can least afford to pay, as though somehow a tax levied on business is not ultimately paid by the people anyway. Taxing the “windfall profits” of the oil companies somehow has more magic in it than taxing the retail product, such as fuel at the pump.

This sort of demagoguery has continued in the American economy for 62 years now—the 16th Amendment was adopted February 25, 1913—and it got into high gear about 40 years ago. In the past two decades, capitalizing on the appalling apathy of the American public and their apparent inability to reason simple economics, it has reached a crescendo, a barrage issuing constantly in the mass media and even from many pulpits.

The end result is to encourage waste of true wealth and a discouragement of *incentive* to produce true wealth. When we waste wealth we waste energy: there is a remarkable correlation between (1) energy consumption per capita per year, (2) the Federal

debt, and (3) inflation. The three curves are parallel and move up (and although seldom, also down) together.

So when I suggest a completely free-market approach to energy, I am referring not only to the absence of bureaucratic controls over production, distribution, and pricing, but I am referring to the total *absence of taxation* from natural resources to final consumption. I am talking about the ultimate in *tax incentives*.

IT'S BEEN DONE BEFORE

There is precedent for the concept of tax incentives. I will mention two, but there are others. When the government wanted to stimulate the development of Puerto Rico, they did it by exempting from taxation those industries which established plants there, and the individuals employed by them. This has had the desired effect. The net individual income rose 41 percent faster in Puerto Rico in the 1960-1970 decade than it did in the U.S. as a whole and in 1972 this little island of about 2.8-million people and 3421 square miles had a gross product of \$5.823-billion.

The second example is in tax-free municipal bonds, making it easier for cities to finance capital improvement projects at lower interest rates. Cities have an outstanding debt of around \$160-billion today (1975) and one-year prime municipal bonds bear about one-half the interest rate as prime corporate bonds or U.S. Treasury Bills. This policy has also worked as intended by those that made it.

We have indirect tax incentives all the time—it has become almost traditional in American policy to “throw money” at any problem that besets us, by tax subsidies, government payments (e.g., price supports and payments to farmers not to produce), government loans, government contracts, and the like. But for some reason we have strayed from the idea that *not taxing in the first place* might be a better stimulant, a better incentive than taking money from one pocket, keeping 30-40 percent for administration, and returning the balance to another pocket.

We have gone much too far, however, in our basic taxation policies to make radical changes overnight in a wide range of products and businesses. The hue and cry against such a move would be overpowering. People would be literally inundated with dire warnings of disaster if we dared make such a radical change in our tax system as to do away with taxes on business—no more hidden taxes—and in their place substitute taxes directly on the people; or alternately, to repeal the 16th Amendment. If libertarian goals are to be accomplished, pragmatic reality must be recognized even though this may seem to be apostasy from principle; the people who *vote* are going to be the ones that must change the system if it is to be changed by constitutional process.

We have in the energy situation an ideal opportunity to test the validity of a completely free-market

approach. If it fails, no harm is done because the taxes "lost" would not have been there anyway in the plan to be proposed here. If the concept succeeds, it could well become the oasis out of which the vast energy wasteland becomes fertile to produce true wealth and abundance beyond any conception.

The approach suggested is to apply completely free-market principles to *new energy sources and new fuels*; coupled with some interim measures designed to (1) relieve the pressure and competition for supply now present between the nation's two largest energy users, electric utilities and transportation, and (2) to create, for petroleum, more competition. Competition, and only competition, will bring down the cost of gasoline and fuel oil. Price and production controls will only create shortages and higher prices, and in the end stifle the economy.

INTERIM STEPS

1. Repeal the National Environmental Policy Act of 1969 and its subsequent collateral acts and amendments, and start over, or at the very least, prohibit court attacks on matters relating to energy. Specifically, remove, for a period of years long enough for the balance of the program to operate, all controls on the fuel burned by fossil-fuel steam electric power plants, *encouraging* but not *directing* them to use low sulfur fuels and to substitute nuclear reactors for their heat sources. Permit them, indeed encourage them, to return to coal for an interim period to relieve the pressure on oil and natural gas. Offer them tax incentives—not payments, but *deductions*, such as fast write-offs or even direct tax credits in proportion to their use of nonpolluting fuels *other than oil*.

2. Remove the interstate natural gas industry and its pipelines from the jurisdiction of the Federal Power Commission or any other agency, by repeal or suspension of the Natural Gas Act of 1938 if necessary. Free this industry completely from government controls over production, pipelines, production and pricing, both interstate and intrastate, excepting only those provisions of antitrust statutes preventing merger monopolies or restraint-of-trade agreements with other competitive forms of energy. (This exception is vulnerable to the charge that it is morally inconsistent with a true libertarian position, to which I would reply is it better to make *some* progress toward the ultimate philosophical goal or stand on principle and accomplish nothing?)

These two interim steps would provide instant relief from the pressure on oil between electric utilities and transportation, and would allow natural gas to compete in the marketplace. This would automatically begin to control the market for oil by strengthening its major competitors. Taxation and other things such as labor laws, safety laws, etc., would remain on both industries so that neither one would be placed at a disadvantage relative to the other.

LONG RANGE STEPS

3. Establish the concept of "exempt commodities" and provide that such exempt commodities would be completely free of taxation at any Federal, state, or local level, for any purpose, from their original production to their ultimate consumption. The earnings of all workers working in exempt commodities would be completely exempt from taxation of any kind—income taxes, unemployment taxes, social security taxes. Workers would have an

"The Senate of the United States is a fine group of dedicated, honest, courageous, sincere, intelligent, and able people — with 90 or 95 exceptions!"

unlimited right to strike and *not to strike*; management and unions would have an unlimited right to bargain, for years if they wanted to, without government "mediators" or control. There would be no capital gains tax or transfer taxes on any capital stock in exempt commodity industries. Instead of rigid enforcement of "blue sky laws" the government would *widely publicize* any fraudulent or risky practices threatening new investors in the enterprise, but would nevertheless leave those investors free to evaluate *for themselves* whether or not to put their money into the ventures. Exempt commodities would be in a *completely* free market, and the workers within the industries concerned only with exempt commodities would be exempt from taxation for so long as they worked in them, on their earnings from them.

The initial list of exempt commodities would be the following:

- All coal, derived from *new* mines ("new" meaning commenced after the effective date of

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the exempt commodity legislation), and processed in *new* facilities to produce low sulfur (one percent or less) *hydrocarbon fuels and lubricants*. All of those fuels and lubricants, and the coal from which they came, would be "exempt commodities"; other by-products would not be, nor would the supplies and materials needed for plants or for production or distribution be exempt.

"The real solution to our energy problems lies not only in a free-market approach but in a completely free market approach, without even application of the 16th Amendment."

- Electric power plants made using *breeder reactors* of at least 3000 megawatt capacity, and the breeder reactors themselves. Such rules and regulations as are reasonably necessary for bona fide safety in such plants would be retained, but the findings of the Nuclear Regulatory Commission as to the safety of such plants would be declared conclusive, with the right of court review reserved to the Attorney General of the United States. Remove such plants from state jurisdictions until they are on line. In line with providing a totally free market situation such plants would be removed from the protection of the Price-Anderson Act (which limits the liability of power companies and their insurers to \$560 million), and such plants would not receive fuel, R and D or waste disposal subsidies.

- *Fuel Cells* using hydrocarbon fuels from coal, or natural gas, for residential use. (These exist now only in pilot installations.)

- Solar cells or arrays able to produce at least 120 volts and 100 amperes of 60-Hz AC power continuously. (These do *not* now exist.)

- Solar energy converters of other types, as for heating or heat engines.

These steps are all that would be needed to furnish a complete, permanent solution to our energy problems, and go a long way toward solving our inflation and recession problems as well. They amount, in principle, to *getting the government out of the act* to let a completely free market operate for once and show what it can do, in two particular areas—new

clean fuels made from coal, our most abundant resource, and nuclear power from breeder reactors, our most pressing need. The interim steps of removing restrictions on coal-burning power plants and on natural gas will serve to alleviate the short-term problems in the time required for the exempt commodities to flourish.

Note that nothing is said about the oil industry. As previously noted, broad adoption of the exempt commodity approach would be inadvisable because we are too deeply entrenched—buried might be a better word—in the concept of taxation and control of production. Managers wouldn't know how to react if they didn't have to convince some government agency to approve something they wanted to do, or consider the tax consequences of every act. It would be better to try this in an entirely new area, recognizing that eventually this would force oil producers into an unbalanced competitive position. But supplying almost half our present U.S. energy, it will be a little while before they suffer much, and better that they should have this type of threat than a government takeover of their industry under some nice, efficient organization like FOGCO (the proposed Federal Oil and Gas Corp.).

If we were to remove the heavy burdens of multiple taxation and government interference from energy products derived from coal and on new energy devices such as fuel cells and solar cells, our energy problems would vanish. Capital by the billions would flow immediately into such enterprises, and workers would be queued up to work there. Plants for the processing and hydrogenation of coal would spring up in a matter of weeks, and be in full production long before the feeble efforts of the Office of Coal Research or other government agencies produced even a carload of commercially practicable fuel. New exploration techniques and new mines would produce the resources long before the plants needed them. Railroads, trucks, and even pipelines would furnish the transportation easily with the incentive of no taxation on this portion of their business. Millions of abandoned and decaying service stations would dispense the new fuels made from coal.

All of this would not take anything like the 10 years the "experts" predict it will require (with present thinking and policies, and necessarily assuming that we don't collapse first) to develop new fuels from coal. Nor will it take some six years, as it has in the past, for breeder reactors to come on line simply because of a waiting game to see who would pay for them. Remove the pyramiding effect of taxation in the total energy chain from two key areas—coal and nuclear power from breeder reactors—and the time required will collapse like a miracle!

LOOK OUT ARABS!

With competition like this, the price of crude oil and gasoline would be brought under control—*market* control—swiftly and completely. You would, in fact,

hear anguished outcries from the petroleum industry demanding to become "exempt commodity" producers. Foreign potentates would find their market for crude oil to the U.S. drying up; their prices would come down automatically, without regard to the U.S.'s policies toward Israel.

And for precisely these reasons we can expect that the petroleum industry would do its utmost to prevent such a plan from ever getting started. Its managers would rather take their chances on being taken over by the government than face such a threat. Does that tell you anything about how effective such a move would be? If it is not worth doing, then why oppose it? It is going to have to be the *American people* that bring this about; politicians beholden to the interests financing their election campaigns will never consent to it, unless they are convinced by a literal inundation of mail and telegrams that the public *insists* upon it. Will our apathy win out?

I suggest that the servomechanism that is the American economy has suffered too much and too long from artificial inputs and stimulants by *quacks* who don't understand it. They could get away with it in some things because of the inherent stability that resists manual tinkering, but when they meddle with the energy supply they are affecting every single facet of our economy, everything and everybody. They have created a regenerative, unstable system headed pell-mell toward a complete saturation, a collapse, a total failure to respond. They have been administering to the heart patient gas from the wrong tank—nitrogen instead of oxygen—water instead of digitalis and adrenalin. The patient is nearly dead. Remove the *energy quacks* and the patient will recover better on his own. The servo itself is inherently stable; the feedback from the marketplace is more than adequate to control it, but not when they keep crossing the wires and scrambling the signals. We have a decision overload, crisis shock. Our "managers" cannot manage, our "leaders" cannot lead. They have lost sight of the cause-effect relationships because the observation time is too long. It is time they relinquished the controls to the *only* regulator powerful enough to stabilize the system—the American people in a free marketplace. ☒

NOTES AND REFERENCES

For technical background on fossil fuels and energy problems, either of the following references are recommended:

- John C. Fisher, *Energy Crises in Perspective*, John Wiley & Sons, Inc., 1974.
- Isaac Asimov, *Asimov's Guide to Science*, Basic Books, Inc., 1972 edition, particularly Chapters 5 through 9.

For a bureaucratic viewpoint by one of the more able scientific administrators, also consult *The Nation's Energy Future*, Dr. Dixy Lee Ray (Chairwoman, AEC), 1 December 1973. U.S. GPO Stock Number 5210-00363. This outlines the government-support approach but ignores the libertarian alternative.



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A graduate of the University of Oregon Medical School, Dr. Boland is currently practicing medicine as an Ear, Nose and Throat physician in Thousand Oaks, California.