

Nuclear Power: Aid to Dependent Industries

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One danger is that the electric atom's proponents, suffering from a Vietnam mentality, will attempt to prop up the technology with a massive infusion of more overt government subsidies and incentives. If that happens, the political response will be analogous to Vietnam. The more proponents attempt to prop up the industry, the more visible will atomic power's economic defects and hidden subsidies become, the more political opposition will arise, and the more difficult will it become to pass the next round of subsidies to keep the industry going. In the end, the industry will have finally collapsed and the nation will have recognized that the useless infusion of funds was avoidable.

Ralph Nader and I made the above statement during testimony to a congressional subcommittee in September 1977. Now, with Ronald Reagan as President, with the appointment of an unswervingly pronuclear Energy Secretary, with a federal budget devoted to nuclear power at the expense of conservation and solar energy, and with industry and government officials proposing federal financing to clean up the atomic industry's mistakes at Three Mile Island, the scenario we predicted is beginning to develop.

Reagan reflected his commitment to the nuclear industry during his acceptance of the Republican nomination in Detroit, when he blamed the industry's troubles on a "tiny minority opposed to economic growth," engaged in "obstructionist campaigns." But this simplistic statement ignores the real economic factors obstructing nuclear energy: atomic power will not save oil, is not needed because of a national glut of electrical capacity, and is crumbling from its own economic defects.

The nation's energy problem is oil consumption, not electricity—which is the only form of energy atomic power can supply. Nuclear power contributes only 13 percent of electricity production, representing 4 percent of the nation's total energy use. At the same time, the electrical sector accounts for only 9 percent of the nation's oil use.¹ A good portion of that oil goes to plants used for peak loads which must be started and shut down quickly—a requirement nuclear plants cannot fulfill. So even a maximum nuclear development program would replace only a few drops in the oil import bucket. Serious oil-saving measures must focus on the transportation sector—which accounts for about 52 percent of national oil consumption.²

Even if nuclear power plants could save oil, they would not be necessary. In 1980, nationwide electrical generating capacity was 32 percent beyond even the highest electrical load for the year.³ This is far more than any prudent reserve margin necessary to compensate for unanticipated demands and maintenance. Utility ratepayers suffer from this overcapacity, since they ultimately pay construction costs and interest on money borrowed, whether power plants produce electricity or sit idle. Utility executives have been forced to cancel and defer nuclear plants by the score because new electrical capacity of any type is simply not needed.

In addition, the Three Mile Island accident of March 1979 has amply demonstrated the economic drawbacks of atomic power. General Public Utilities (GPU), the holding company owning the plant, maintained property damage insurance of \$300 million, the maximum available, on the crippled Three Mile Island (TMI) Reactor Unit Two. Estimated costs of repairing and decontaminating the plant, set at \$140 million two weeks after the accident,⁴ have escalated rapidly. Damage estimates rose to \$400 million a few months later,⁵ then to \$1 billion in November 1980.⁶ Although the latter figure represents about 150 percent of the cost to *build* the reactor, future estimates are more likely to be larger than smaller.

1 *Monthly Energy Review*, U.S. Department of Energy, April 1981, pp. 8, 27.

2 *Ibid.*, pp. 8, 26.

3 "31st Annual Electrical Industry Forecast," *Electrical World*, September 15, 1980, p. 66.

4 Roger Smith, "Insurance Pools Roughly Estimate Three Mile Damage at \$140 Million," *Nucleonics Week*, April 12, 1979, p. 3.

5 "TMI Cleanup Cost Hits \$65 Million and Counting," *Nucleonics Week*, August 30, 1979, p. 4.

6 John Emshwiller, "As Three Mile Island Clean-Up Costs Soar, GPU and Regulators Turn to Uncle Sam," *Wall Street Journal*, November 14, 1980, p. 31.

The accident has financially damaged GPU in other ways as well. Utility regulation allows each private electric company a guaranteed rate of return on its "rate base"—the sum of investment in "used and useful" transmission and generating equipment. Since nuclear plants have much larger construction costs than fossil-fuel electric plants, utilities have been able to inflate their rate bases by building atomic reactors. But as GPU is learning, a damaged reactor is neither used nor useful. It could be seven more years before TMI Unit Two is decontaminated and repaired, and even the company's undamaged Unit One has been shut down pending completion of a lengthy Nuclear Regulatory Commission (NRC) proceeding. Consequently, utility regulators in New Jersey and Pennsylvania have removed both TMI units from the rate bases of GPU subsidiaries in those states. This means that cash flow for GPU and its subsidiaries will be significantly depressed for some time.

GPU has frequently complained that it faces bankruptcy from its financial difficulties resulting from the accident. To solve its self-inflicted economic problems, the company has turned not to its investors, but to taxpayers. In December 1980, GPU filed a claim with the NRC—which amounts to a backdoor application for taxpayer subsidies—for \$4 billion in damages from the accident.⁷ In October 1981, after heavy GPU lobbying, the Reagan administration asked Congress to appropriate \$123 million for the TMI cleanup.⁸ If GPU has its way, the costs of the TMI cleanup will ultimately be borne by individual citizens, either as electric ratepayers or taxpayers.

Public debate will continue for years over the health effects caused by the radioactivity released during the TMI accident; but as far as the atomic industry is concerned, the most important long-range effects will be economic. GPU's financial problems, it must be remembered, stem from an accident representing a small portion of the catastrophic potential of a nuclear power plant. Faced with the real possibility that such a "minor" accident could cause damages exceeding available property insurance and threaten a company with bankruptcy, any utility executive will have serious second thoughts about nuclear power investments. In addition, TMI has demolished the atomic industry's propaganda statements on the economic benefits of nuclear energy: the accident has demonstrated that atomic power is a very expensive way to produce no energy at all.

7 John Emshwiller, "GPU Seeks \$4 Billion from NRC, Asserts a Lack of Regulation at Three Mile Island," *Wall Street Journal*, December 9, 1980, p. 10.

8 Arlen J. Large, "Battle Opens on Paying \$1 Billion Cleanup Bill for Three Mile Island," *Wall Street Journal*, October 21, 1981, p. 1.

With the existing state of the nuclear power industry, Ronald Reagan and officials of his administration will experience extreme difficulty in reconciling their alleged preference for free-market economics with their support of atomic power. In fact, Reagan in his actions and proposals has done nothing to unleash the economic forces which might yet drive the industry under. On the contrary, Reagan's proposals, branded "nuclear boosterism and government intervention to aid the sagging nuclear industry"⁹ by Congressman Edward Markey of Massachusetts, will transfer billions of dollars from ordinary taxpayers to atomic power corporations. The same Ronald Reagan who lectured leaders of developing nations that they must "believe in the magic of the marketplace" is doing his best to shield the atomic industry from marketplace forces.

The extent to which the industry has already benefited from federal interference was outlined in a December 1980 Department of Energy draft study, which estimated that the government has spent \$37 billion trying to develop and sustain atomic power. Significantly, one of the early acts of Reagan's administration was to rewrite the study, and by omitting some categories of federal expenditures, to produce a revised estimate of "only" \$13 billion in subsidies.¹⁰

Reagan wants to expand this federal commitment by devoting taxpayer dollars to the construction of a breeder reactor. Because the breeder uses toxic plutonium—material for nuclear weapons—as its fuel, this device represents a unique danger in its multiple threats to fiscal responsibility, public health, and efforts to reduce nuclear proliferation. In April 1977 President Jimmy Carter announced his intention to halt the Clinch River plutonium breeder, a federal demonstration facility in Tennessee, and to "defer indefinitely" the nuclear fuel reprocessing activities which would recover plutonium from commercial reactors. Carter believed that these actions were necessary to give integrity to U.S. efforts to inhibit the worldwide development of a plutonium nuclear industry: such a commercial industry could disguise a nation's diversion of plutonium for weapons. Now Reagan has chosen to abandon Carter's sensible efforts to deter proliferation.

In October 1981, Reagan announced that he would allow commercial reprocessing, and would proceed with construction of the Clinch River breeder which will cost taxpayers at least \$3.2 billion. But a federal commitment to the plutonium breeder will not end with this demonstration plant, which is only about one-third the size of present-day commercial reactors. Plans are to soak the tax-

⁹ Don Oberdorfer, "U.S. Shifts on A-Fuel Processing," *Washington Post*, October 9, 1981, p. A15.

¹⁰ Arlen J. Large, "Estimate of U.S. Aid to Nuclear Industry is Cut Sharply in Revised Agency Report," *Wall Street Journal*, March 12, 1981, p. 10.

payers for more funds to construct a larger plant, designated the Commercial Breeder Reactor, which supposedly will demonstrate commercial feasibility. The Reagan budget includes funding to begin design work on the reactor.

Subsidies for plutonium will not even end with the breeder, as direct payments to owners of reprocessing plants and other facilities necessary to support the breeder will probably be required. In September 1976, Nuclear Fuel Services, a subsidiary of Getty Oil, announced that it was abandoning its reprocessing plant in West Valley, New York, as an uneconomical venture. During the Ford Administration, corporate giants such as Allied Chemical, Gulf Oil, Westinghouse, General Electric, Babcock & Wilcox (which manufactured the Three Mile Island reactors), and Exxon all submitted proposals for federal assistance for plutonium fuel facilities which were planned or underway. Total costs for government funding of such facilities could easily go over \$2 billion.¹¹

Reagan's zeal for a plutonium nuclear industry also led him in July 1981 to announce that he will not necessarily oppose commercial plutonium activities of other nations, a statement that will undercut his alleged "nonproliferation" policy. Since another part of that policy is a determination that the United States will be a "reliable supplier" of nuclear materials and nuclear plants, Jeremy Stone, director of the Federation of American Scientists, called Reagan's program a "rhetorical cover for the desire to sell reactors abroad."¹²

Reagan, along with the atomic industry, recognizes that with a glutted domestic nuclear power market, uranium companies and reactor vendors must look more and more to markets abroad to keep their sagging fortunes alive. It is for this reason that the administration is negotiating to supply uranium fuel to Brazil, even though that country has refused to renounce the development of atomic bombs by signing the Nuclear Nonproliferation Treaty. The U.S. uranium would fuel a Brazilian reactor built by Westinghouse and is scheduled to begin operation this year. Likewise, the Reagan administration has been negotiating with South Africa, another non-signer, for the export of U.S. nuclear fuel and technology. If such an agreement is consummated, it will rightly spark moral outrage both in Africa and at home.

With Reagan's sympathy for the atomic industry, his softness on government interference in the form of the Export-Import Bank becomes understandable. The federal Ex-Im Bank offers loans at very favorable terms to nations which

¹¹ Copies of these proposals were obtained from the U.S. Energy Research and Development Administration by the Natural Resources Defense Council and the Public Interest Research Group, Washington, D.C., through Freedom of Information Act requests in 1975 and 1976.

¹² Quoted in John Walsh, "Reagan Outlines Nonproliferation Policy," *Science* 21, July 31, 1981, p. 523.

import expensive, high-technology U.S. products—such as nuclear reactors. Ex-Im loans and loan guarantees to the tune of about \$5 billion have helped finance reactor sales abroad.¹³

In April 1981, as part of his desire to reduce federal involvement in banking endeavors, Reagan's budget director David Stockman planned to cut Ex-Im loans, which primarily go to a few large companies, by about 20 percent. But after corporations such as Boeing, Westinghouse, and General Electric lobbied against these cuts, the Reagan administration flip-flopped and allowed Congress to leave the Bank's funding at previous levels.¹⁴

With regard to the domestic nuclear power market, the Nuclear Regulatory Commission under Reagan has issued a string of rules and proposed others which are supposed to streamline the nuclear licensing process. These rules will succeed in further restricting public participation, which already faces severe impediments, in the Commission's proceedings. But the NRC's actions will not solve the real reasons for delay in nuclear plant schedules, which are industry-generated and outside the licensing process. Previous studies by the Federal Power Commission and the NRC itself have shown that nuclear plant delays are predominantly due to such factors as equipment, construction, and delivery problems; the need to backfit and address overlooked safety problems; electrical load growth projections which utilities have only belatedly recognized as overblown; financial difficulties; and the general economic problems of atomic plants. Electric utilities have even cancelled more than a dozen nuclear plants *after* they were granted construction permits by the NRC. The Commission's attempts to reform the public hearing process will simply not speed nuclear construction significantly, but will further shut citizens out of the process.

One of the NRC's proposals even evaded an opportunity to correct a financial problem brought to light by Three Mile Island. The Commission's regulations specify that nuclear power plant licensees must demonstrate financial capability to safely operate reactors and permanently retire them at the end of operation. The financial problems of GPU and their requests for ratepayer and taxpayer assistance demonstrate that GPU is hopelessly incapable of paying for the Three Mile Island accident. Nor is any other utility in the country likely to have the financial wherewithal to fund cleanup of other nuclear accidents. If the NRC were to properly enforce its regulations, it would require utilities to cease operating nuclear reactors until the industry develops a program to fund decontamination of Three Mile Island and other accidents. Incredibly, however, the NRC an-

¹³ John R. Emshwiller, "As Iraq Episode Shows, Nuclear Proliferation is Rising Global Worry," *Wall Street Journal*, July 2, 1981, p. 1.

¹⁴ Art Pine, "Export-Import Bank May Avoid Budget Ax and Get Larger Role," *Wall Street Journal*, July 22, 1981, pp. 1, 27.

nounced in August 1981 that it would consider eliminating its regulations on financial capability.¹⁵ Faced with a situation where the atomic power industry is failing to meet its regulations, the Commission's approach apparently is to abolish the unmet regulations.

The Reagan administration, the NRC, and the Congress have also ignored another significant government distortion of marketplace forces. Ordinarily, a natural economic deterrent to reinvestment in an ultrahazardous technology such as atomic power would be the large liability payments that would result if an accident did significant damage to the lives, limbs, and property of the general public. But in 1957, in order to entice electric utilities to build atomic plants, Congress removed this deterrent by passing the Price-Anderson Act, which severely limits the liability for public damages that might be caused by a major reactor catastrophe. A serious reactor accident could cause billions of dollars in property damage, in addition to many thousands of deaths, injuries, and eventual cancers. But Price-Anderson would allow victims to collect only pennies on the dollar for their damages from nuclear power utilities. The Reagan administration has been silent on the prospects of ending this serious marketplace distortion, perhaps because many observers believe that there would be no commercial atomic industry without the Price-Anderson Act.

The last part of Reagan's atomic power policy is his determination that the federal government will construct facilities to handle the radioactive waste from nuclear power plants. Reagan has thus failed to challenge the notion that the federal government should bear the responsibility for managing the commercially produced nuclear wastes, which remain hazardous for thousands of years. When Reagan and Stockman discuss the concept of "user fees," they have thus far failed to propose charging the atomic industry for the billions of dollars that the government has spent on the industry's behalf in attempts to resolve questions of reactor safety and radioactive waste management. Indeed, much of the taxpayer funds for these areas have gone directly to atomic corporations as contracts to conduct research on these industry-generated problems. Nor has the Reagan administration made any proposals to require the atomic industry to set aside funds dedicated to paying the costs of guarding nuclear wastes over countless generations and preventing the dispersal of radioactive material through the environment.

Reagan's economic philosophy is selective and inconsistent. He is quite comfortable with all the past subsidies and existing marketplace distortions that favor the atomic industry. His concern for free markets extends to removing health and safety regulations, but he fails to acknowledge that regulations are

15 U.S. Nuclear Regulatory Commission, *Federal Register* 46, 41786 ff., August 18, 1981.

made necessary by the ultrahazardous nature of nuclear technology and the removal of natural economic deterrents such as accident liability. As for the external costs from atomic mismanagement—reactor accidents, nuclear proliferation, or contamination from atomic waste—Reagan is quite willing to leave these to be paid by taxpayers and society in general. His solution for the industry's ills, moreover, is further government interference on the industry's behalf and massive and more overt subsidies and marketplace distortions.

Reagan increasingly will have to find some way to match his rhetoric on economics and atomic power with reality: if the nuclear industry is to have a future, the federal government must finance the breeder and plutonium fuel processing facilities, because private investors consider them too risky; and the government will have to provide taxpayer funds to clean up TMI and manage radioactive wastes, when the industry has failed to dedicate its own money for the purpose. Even then, the Reagan administration must devise further subsidies to induce utility company investments in atomic reactors rendered unnecessary by the national electrical capacity glut, or find ways to dump this hazardous, uneconomical technology in foreign markets. And all this must go to an industry that has already been subsidized to the teeth for a generation.

Thus, Reagan's energy budget, which severely slashed federal funds for energy conservation and solar energy while boosting expenditures for nuclear power activities, represents the "Chrysler syndrome"—an attempt to prop up an expiring economic option while ignoring those that will work. Energy conservation does not mean, as Reagan has claimed, that everyone will be "too hot in the summer or too cold in the winter." Conservation means more efficient use of energy, and is the most economical, sensible, and secure of the nation's energy options. Numerous studies, along with practical experience, have shown that energy efficiency improvements can be implemented more quickly, more cheaply, and with greater job-creating benefits than nuclear power or any other energy production source. For its long-term energy future, the nation must increasingly turn to renewable energy sources, such as solar power in all its forms. An additional advantage of energy efficiency and solar power is that unlike atomic power, they can displace both oil and electricity use.

The history of atomic power represents not so much technology run amok as corporate favoritism run amok. Nuclear power issues, as much as any others, thus provide voters an opportunity to separate fiscal "conservatives" from "corporatists." The distinction is simple: the conservative will be consistent in his voting record, opposing both corporate subsidies and spending for government programs. The corporatist, on the other hand, will support federal subsidies and tax breaks for the rich, the corporate, and the atomic industry. But the situation will be altered for the nonrich, nonwhite, noncorporate, and for economic alternatives to nuclear power—such as energy conservation and solar energy: these the

corporatist will leave to the mercies of marketplace forces.

As his Secretary of Energy, Reagan appointed James Edwards, former governor of South Carolina. During his confirmation hearings, Edwards depicted himself as a states' rights advocate, although but he opposes granting governors veto power over siting radioactive waste facilities in their states.¹⁶ He also claimed to be a fiscal conservative, except when it came to atomic power. He supported federal funding for the breeder reactor and plutonium fuel processing plants, and also defended the past subsidies for the atomic industry. Moreover, when Senator Dale Bumpers of Arkansas asked what Three Mile Island meant to him, Edwards replied that, "It conjures up a company that's in trouble and needs some help."¹⁷ James Edwards thus established himself as either a very confused man or a corporatist of the first rank.

Whether even Ronald Reagan's program can save the atomic power industry is doubtful, considering the serious multiple economic defects of its technology, along with the unprecedented levels of government subsidy that would be necessary to bail it out. But with a House of Representatives that supported the President's budget and tax package, and with a Senate that is downright reactionary, Reagan and his legislative supporters can pour far too many taxpayer dollars down a nuclear rathole in attempts to prop up a losing enterprise.

The push to revitalize the atomic industry on the backs of taxpayers has begun, but massive public opposition has not yet materialized. If the opposition fails to develop, or if it is thwarted by latter-day Red-baiting (Secretary Edwards claimed in an interview with a South Carolina newspaper that persons opposed to nuclear power were being used by "subversive elements"¹⁸), then all citizens will lose. Taxpayers and energy consumers may be able to tolerate fiscal conservatives, but the nation cannot afford atomic power corporatists.

16 Rich Jaroslovsky, "Reagan's Choice for Energy Post Mirrors His Stress on Output Rise, Deregulation," *Wall Street Journal*, January 13, 1981, p. 11.

17 Constance Holden, "Former Carolina Governor to Head DOE," *Science* 21, February 6, 1981, p. 555.

18 Cited in "Get Rid of Nuclear Critics—Jim Edwards," *Not Man Apart*, Friends of the Earth, August 1981, p. 17.