

# Turn on the Light and Say Goodnight

## Nuclear Technology and the State

Bob Nirkind

“A nuclear power plant is infinitely safer than eating, because 300 people choke to death on food each year.”

— Dixy Lee Ray, former head of the Atomic Energy Commission (AEC), now governor of Washington

“You can’t have a riskless society.”

— Nelson A. Rockefeller on the leakage of radioactive water from the two million cubic feet of buried radioactive trash and 600,000 gallons of highly radioactive liquid wastes at the West Valley, New York nuclear waste recycling plant

“It is not a question of making nuclear power safer for people; the insurmountable obstacle is that we cannot envision any way to make people safe for nuclear power generation.”

—John Gofman, co-discover of U-232, Pa-232, U-233 and Pa-233, former AEC scientist, now its staunchest adversary

Anyone who genuinely believes that Jimmy Carter is opposed to nuclear-generated power as America’s primary energy source is a fool. Anyone who believes that uranium-generated energy is substantially safer than plutonium-generated energy is an even greater fool. And anyone who believes that life on this planet can in any way harmoniously co-exist with nuclear energy fully deserves what the future holds in store.

Last November, Carter’s insistence that he would consider nuclear energy only as “a last resort” while publicly promoting the development of solar energy won him at least a million environmentalist votes. When, as President, Carter appointed James Schlesinger—former Secretary of Defense, chairman of the AEC and director of the Rand Institute—as this country’s reigning energy czar, he named a man who, obviously with the nod from the man himself, immediately answered queries as to the government’s position on nuclear energy with, “We are getting to the point that we must consider the last resort.”

Despite initial wide-spread opposition to his appointment of Schlesinger, when, in April of this year, Carter announced a seven-point plan to defer “indefinitely” the commercial production of plutonium in the United States, environmentalists and anti-nuke organizations all across the country led the applause. If they’d have bothered to look beyond the short-range, unrealistic plans that Carter had laid out, they’d have realized how totally ridiculous and misdirected their enthusiasm was.

Contrary to popular opinion, Carter has absolutely no intention whatsoever of abandoning nuclear energy. Not only does he intend to step-up the development of the light-water reactor, but he’s steadfastly refused to make any provisions in his plan for concerned citizens to mediate in nuclear power cases. In point of fact, Carter believes that nuclear-generated power is unquestionably vital to meeting America’s future energy needs.

As proof of Carter's endorsement of the proliferation of nuclear energy, an analysis performed by Thomas Cochran of the Natural Resources Defense Council concluded that, "President Carter's proposed (1978) funding level for the nuclear-fission technologies is still twice that of conservation, solar and geothermal technologies combined...Approximately one-half of this amount is for...the Liquid Metal Fast Breeder Reactor...the solar program (has) a mere cost of living increase over,...1977 funding levels."

What Carter did manage to achieve by his anti-plutonium stance was to, in effect, take some of the fight out of the anti-nuke groups, temporarily staving off many of their arguments as to the safety of nuclear power while at the same time following through with the development of conventional uranium-fueled fast breeders.

As a point of reference, the basic difference between the plutonium-fueled fast breeder reactor which corporations such as General Electric encourage developing and the uranium-fueled fast breeder which Carter currently favors is simply this: The plutonium-fueled reactor generates electricity while producing more plutonium than it consumes, thus allegedly setting up a situation which the government insists is ripe for terrorist attack (since it takes as little as twelve pounds of plutonium, plus the right equipment and expertise, to make a nuclear explosive).

The uranium-fueled reactor, on the other hand, uses up more uranium than it produces in generating electricity. The problem here is that there may not be enough uranium left to last a considerable number of years, thus producing a decided gap between the amount of uranium necessary to this country's domestic needs (not to mention Carter's recent commitment worldwide) and the amount realistically available.

## **Nuclear Commodities**

After the Nixon administration opened up the nuclear marketplace in 1973 with the ruling that American corporations could trade in nuclear commodities—the result being that six nations currently have nuclear weapon capabilities (the U.S., the Soviet Union, Britain, France, China and India) with eleven more not far behind (Argentina, Brazil, Canada, Israel, Japan, Pakistan, South Africa, Spain, Sweden, Switzerland, and West Germany). Carter has now attempted to close it again.

In his celebrated nuclear energy speech in April, Carter announced that he would do everything possible to discourage the proliferation of nuclear weaponry abroad. To other nations, he promised increased supplies of uranium fuel if they were willing to give up plutonium in return. Being that many of the nations, such as Britain and France, already have prototype plutonium-fueled breeder reactors, it wasn't likely that his "generosity" would meet with universal acceptance.

To some nations, Carter's decision to set aside the plutonium-fueled breeder reactor smelled suspiciously of monopolistic intentions. Seeing as the U.S. already has a wealth of coal and uranium for fuel, even if its oil supply were to dry up, chances are that it could weather practically any energy crisis. A majority of other countries in the world wouldn't be that fortunate, though, and a tying up of the world's plutonium supply could easily result in America's assuming the role of a nuclear fuel baron, doling out its excess to favored countries while bleeding, or outright ignoring, those less-favored.

Thus far, Carter's sales pitch hasn't entirely been convincing or successful. Despite strongly-worded protests from the Administration, West Germany recently announced its intention to carry out its exportation of plutonium-reprocessing equipment to Brazil (a deal reportedly worth \$10 billion to Germany), and France announced the same concerning its similar deal with Pakistan. Although Administration sources insist these deals will mark the end of selling anything "but services," that remains to be seen. Carter's apparent failure to reach accord with West Germany's Helmut Schmidt in the much-ballyhooed seven nation London conference recently does little to back up that contention.

Interestingly enough, while Carter's working at a frantic pace to supposedly prevent a plutonium economy, a May 7<sup>th</sup> UPI wire service story reported that "President Carter has approved the export of 'significant quantities' of weapons-grade uranium to Canada, the Netherlands, Japan, Belgium and West Germany for a variety of research projects, a high state department official disclosed Friday."

Meanwhile, as the worldwide machinations of the State to determine the conditions under which we're to live or die continue, and the media falls all over itself in a narrow-minded attempt to interpret the significance of Carter's

nuclear policy within existing capitalist terminology, the underlying horror of surviving in a nuclear-based society goes ignored.

The simple truth is that nuclear power is deadly dangerous, whether it's plutonium-generated, uranium-generated or whatever. And no matter how much assurance and reassurance we receive that "everything is under control—nothing can go wrong," it's a fact that the development of the nuclear energy industry throughout the world over the past thirty years has been characterized by a never-ending series of near-disasters, worker deaths, lost fuel supplies, terrorist attacks, plants damaged by acts of nature and leakages of atomic wastes.

If the fear of a nuclear-induced accident is still slight, it's only for want of a major catastrophe to set it off. Again for the sake of reference, a "major atomic incident," by the estimates of the Nuclear Regulatory Commission (NRC), is the one in which a core meltdown, perhaps (a mishap during which the fuel sinks through the plant floor, melting everything it touches, theoretically until reaching the earth's gravitational center), could release sufficient radioactivity to contaminate 100,000 square miles, killing 50,000 people and injuring 100,000. Should the radioactive element involved be, let's say, plutonium-239 (which has a half-life of 24,000 years), the contaminated area would be virtually uninhabitable for hundreds of thousands of years to come.

## **Nuclear Horror Stories**

While political and economic analysts are given an over-abundance of room to prattle on about Carter's nuclear wheelings and dealings, buried deep in the news—if mentioned at all—are real-life, day-to-day horror stories whose consequences affect us indirectly, if not directly. Four such horror stories to appear on the printed page recently concern the nuclear waste recycling plant in West Valley, New York; the billion-dollar Diablo Canyon Nuclear Reactor located twelve miles from San Luis Obispo on the central California coast; the Vermont Yankee Reactor in Vernon, Vermont; and the currently uncompleted Barnwell Nuclear Reprocessing Center in Barnwell, South Carolina.

In the April 10<sup>th</sup> issue of the *New York Times Magazine*, a story appeared chronicling the technological and economic failures of the West Valley nuclear recycling plant, a facility built by a combination of the political clout of then-New York Governor Nelson A. Rockefeller and the funding of Nuclear Fuel Services (NFS), once a subsidiary of W.R. Grace and now of Getty Oil.

Despite the initial reassurances that the plant, the world's first commercial nuclear waste reprocessing center, was absolutely safe, its history has proven it to have been anything but. Due to the 600,000 gallons of high-level radioactive liquid waste (waste figured to be highly toxic for the next 250,000 years) buried on the site, its failures will be around to haunt us for generations.

The accounts of accidents and acts of brazen stupidity at the West Valley facility are nothing short of spectacular. Among the 400 mishaps uncovered by *Times* reporter Richard Severo were: a vending machine which scattered radioactivity throughout the lunchroom after being sprayed with alpha and beta particles from a ventilator backfire in 1968; the flowing of radioactive water into drainage pipes normally used for "clean" water caused by a worker's failure to turn the proper valve; a worker with contaminated hair being advised to have his hair cut without telling the barber about the special nature of his problem; radioactive tools "borrowed" for use outside the reprocessing center; and a security guard in a complex containing lethal radioactive waste material endangering all within when firing wildly at a fox.

From beginning to end, the West Valley facility was a disaster area. In 1972 the plant was closed down temporarily "for expansion" when Atomic Energy Commission (AEC) inspectors charged that NFS failed to "make reasonable efforts to maintain the lowest levels of contamination and radiation." Finally, in 1975, when the New York State Energy Research and Development Authority denied NFS a permit to discharge wastes into the waters surrounding the plant, the operation shut down entirely, leaving behind the aforementioned 600,000 gallons of high-level radioactive liquid waste in a carbon-steel tank buried eight feet below the ground. This, incidentally, is not expected to hold the waste for much longer than a few decades.

Aside from the high-level radioactive waste, NFS has left behind at West Valley 14 trenches, 800 feet long, 20 feet wide and 30 feet deep, with 2 million cubic feet of low-level waste. Already there have been discoveries of seepages

from those trenches. Traces of tritium were found in Buttermilk Creek, which empties into the Cattaraugus Creek, which empties into Lake Erie.

According to the Battelle Pacific Northwest Laboratory in Richland, Washington, the tab for the disposal of the high-level radioactive waste alone at West Valley could cost \$600 million. And due to a rather shady legal agreement it made with New York State, NFS has managed to come out of the fiasco having to cover only about \$2.5 million of the disposal costs, the amount it had accumulated in its “perpetual care fund,” leaving the remainder of the \$597.5 million to the New York taxpayers.

At the site of the Diablo Canyon Nuclear Reactor, the problem is entirely different. After sinking over a billion dollars into the construction of the plant, Pacific Gas & Electric has been informed that the facility is only two-and-a-half miles off-shore from a major earthquake fault with the potential of generating a major shock.

Since the reactor site must obtain an operating permit to open, the future of the plant is up in the air. Adding to the chances of its being denied a permit was a recent report from the Nuclear Regulatory Commission’s engineers warning that the reactor must be able to stand a “short-wave” quake of 7.5 coming from as close as the Hosgri Fault (the fault responsible for the 1927 quake). Unfortunately, the reactor was designed only to withstand a 6.75 quake six miles below the ground. Because the Richter scale is logarithmic, a 7.5 quake computes as ten times the strength of a 6.75 quake.

Should PG&E’s threats of black-outs and brownouts if its permit is denied fail, the utility and its stockholders will be forced to take the billion-dollar loss. Should the permit be granted, all of California may in time take an infinitely greater loss.

Accidents at the Vermont Yankee Reactor Plant are old hat by now. Aside from the problem of a constant emission of radioactivity over its surrounding area—a problem solved by the construction of an eight-foot- thick concrete wall around the reactor’s turbine—the plant has been closed down once already when engineers discovered that the operation’s emergency core cooling system was improperly designed and would eventually crack in operation: the result being a major meltdown. It took \$2.6 million of Vermont’s taxes to make the necessary repairs.

## **Accidents and Funding**

In Vermont Yankee’s most recent accident (July 1976), the plant spilled 83,000 gallons of liquid waste containing radioactive tritium into the Connecticut River. Critics of the facility insist that the spill was a deliberate effort to deal with the plants waste-storage problem. Despite its long series of mishaps, the money behind the plant, the Public Service Corporation, wants to triple its spent fuel storage facilities on the site.

Finally, there’s the Barnwell Nuclear Reprocessing Center at Barnwell, South Carolina, which made the news most recently when Jimmy Carter announced he would block all federal funds necessary to completing the privately-owned plant. Built by a consortium of Allied Chemical, Gulf Oil, and Royal Dutch Shell (and going under the name of Allied General), the Barnwell Center, thanks to the guidelines on radioactive emissions set by the NRC, desperately needs an additional \$850 million in order to complete construction on the massive facility, an operation five times the size of the West Valley plant.

Allied General’s last attempt to wrangle public funds from the federal government for private enterprise consisted of an argument that Barnwell would be an ideal “demonstration facility.” That way, if the plant were to fail, then the responsibility for storing the radioactive wastes would fall into the hands, and pockets, of the state of South Carolina.

Although for at least the time being it appears as though the Barnwell plant won’t be receiving federal funding, the money behind it still has hope. In addition to applying for cash and a construction permit, which curiously it’s never obtained, Allied General has also applied for a license to store nuclear waste, figuring it could be the first step to ultimately achieving completion of its facilities.

## Legalism Fails, But Protests Succeed

Where bourgeois legalism has failed to halt the Jimmy Carters and the Allied Generals, the power of mass protest has succeeded. In Europe the outcry against the proliferation of nuclear energy has been so vociferous that it has had considerable political impact. This is especially true in countries such as Denmark and Norway, where public pressure has been sufficiently threatening to convince its leaders to put off plans to build their first reactors.

Also, in Sweden where Socialist Prime Minister Olaf Palme was voted out of office on the nuclear issue; France, where ecologically-oriented parties grabbed ten percent of the municipal vote in Paris on a ticket of green trees and no nuclear power plants; and Switzerland, where the around-the-clock sitting-in at a nuclear construction site near Basel has caused long delays. Belgium, Luxembourg and Austria too have felt enough opposition to have postponed any nuclear development.

## Protests in Germany

Undoubtedly, the most significant mass protests have occurred in West Germany, where the failure of the Helmut Schmidt government to respond to the multitude of anti-nuclear voices has resulted in pitched battles between heavily-armed riot police and demonstrators at power plant sites from Brokdorf in the north to Wyhl on the Rhine (see FE #280, February 1977 and FE #281, March 1977 for more info).

In mid-February, in the most violent of the protests, thousands of demonstrators armed with clubs and protective helmets in the North German town of Grohnde did battle with 4,000 riot police. This ended up with 80 demonstrators and 237 police being wounded.

Quite probably as a consequence of these citizen uprisings, it was determined on March 14<sup>th</sup>, in a court of law, that the Wyhl nuclear power plant cannot be constructed until it has been proven that an explosion inside the plant or a direct hit by a crashing airplane could not produce a “national nuclear catastrophe.”

Here at home, the Clamshell Alliance demonstrations at Seabrook, New Hampshire, have been the center of American mass protests against nuclear energy. In the eleven months of its existence, the Alliance has managed to grow from a demonstration in which 18 persons were arrested for attempting to plant pine trees on the construction site to the recent sit-in in which more than 2,000 joined.

Fashioned after the Brokdorf occupation in West Germany, the recent protest was the first massive act of civil disobedience against a nuclear power plant in the United States. In a remarkably well-planned demonstration, the protesters forced the armed lackeys of the State to arrest them all, then refused to post bail, thus compelling the taxpayers of New Hampshire to bear the burden of their incarceration: a cost estimated at \$1 million.

In a feeble attempt to marshal support for his militaristic maneuvers, New Hampshire Governor Meldrim Thomson appealed to private citizens, labor unions, and corporations for funds to keep the protesters locked up. Thomson, a rabid nuke supporter who denounced the demonstrators as “nothing but a cover for terrorists,” even requested \$669,000 from the federal Law Enforcement Assistance Administration to ease the costs. He was refused this.

The importance of the Seabrook demonstrations can't be stressed strongly enough. It's entirely conceivable that the recent mass protest there—helped along by the ones in West Germany—has marked a turning point in the



Protest at Brokdorf, W. Germany, 1977

American anti-nuke movement. Anti-Nuclear forces throughout the country have seen that mass protest wields power, much the same as it did in the 60's and the early 70's in the civil rights and Vietnam anti-war movements.

As the movement gains momentum, it'll mean the occupation of partially constructed and fully operational nuclear power plants, as well as simply proposed sites. When the movement reaches that stage, the battles with local, state, and federal governments will intensify. The plants will be turned into armed fortresses, complete with barbed wire fences and heavily armed goon squads. At that point, America may well give birth to a new generation of demonstrations along the lines of those in Mayor Daley's Chicago in 1968.

With the Seabrook and Brokdorf demonstrations, the world has seen the roots of a committed anti-nuclear movement that won't back down, that won't quit until it reaches its objective. The battles ahead may well be long and bloody, but they won't all end in victory for the State. Slowly but surely the forces of capital in Europe are being defeated on the issue of nuclear proliferation. It can happen here too.

*Related:* See "Politics of the 'Nuclear State:' Report from W. Germany" in this issue.

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