



“Nuclear Follies,” a February 11, 1985 cover story in **Forbes**, declared U.S. nuclear power “the largest managerial disaster in business history.” With \$125 billion invested, the magazine wrote, “only the blind, or the biased, can now think that most of the money has been well spent. It is a defeat for the U.S. consumer and for the competitiveness of U.S. industry, for the utilities that undertook the program and for the private enterprise system that made it possible.”

Pretty strong words. But now, a mere 16 years later, nuclear power is being widely reported in the mainstream media as not only the cheapest source of electricity, but also as a clean and environmentally friendly form of energy that we now must embrace to combat global warming.

Even before the 1979 partial meltdown at Three Mile Island, electric utilities that had bought into the nuclear option on the promise that it would be “too cheap to meter” had begun racking up huge debts because the technology turned out to be vastly more expensive and complicated than they had anticipated. After the accident, and the increased public and press scrutiny that resulted, the industry was forced to adopt costly new safety modifications.

Then, in April 1986, a catastrophic meltdown occurred at Chernobyl, spewing high levels of radiation across Europe and galvanizing public opposition to nuclear power both here and in Western Europe. In the U.S., a total of 117 nuclear reactors were eventually canceled, says Safe Energy Communication Council executive director Scott Denman— pointing out that the cancellations outnumber the country’s 103 currently operating reactors.

Except for one or two plants that came online in the mid-’90s, no others were scheduled. “As we went through the ’90s, all those reporters who had been focused on safety issues after Three Mile Island, then the cost, and then safety issues again after Chernobyl, began to drift away,” Denman says. “As events in the industry quieted down, so did the regional reporting, and nuclear power faded from public view,” he explains. The consequence is the recent wave of largely uncritical and shallow reporting.

### Nuclear’s new day

Until the Bush administration took office, any public discussion of expanding nuclear power might have been dismissed as wishful thinking on the nuclear industry’s part. True, the industry has dreamed of its comeback for many years (**Extra!**, 5-6/90). But it wasn’t until the energy fiasco

erupted in California, and the Bush administration and other pro-nuclear politicians began calling for massive increases in energy production, that a nuclear power renaissance could be considered.

Now that nukes are on the table again, many of the “facts” the corporate media are dishing up seem to have come straight from the Nuclear Energy Institute, the industry’s main lobbying group. Take claims about the cost of nuclear power. **ABC World News Tonight** informed its viewers (1/6/01) that nuclear production costs are “lower than any other source, even coal.” This claim was echoed by **NBC** (3/19/01), whose parent company, General Electric, is one of the largest nuclear power plant designers. In comparing the costs of nuclear power to other sources, the **Houston Chronicle** (4/17/01) even used figures that came from an NEI press release—1.83 cents per kilowatt hour for nuclear, 2.07 cents for coal, 3.52 cents for natural gas—without citing the source. Even **Popular Science** (5/01) reported that the inherent instability of fossil fuel costs “has created a long-awaited opening for the oft-despised but super-cheap (less than 2 cents per kilowatt-hour) nuclear.”

These figures, however, include only the operating costs of running the reactors. The big ticket costs associated with nuclear power have been shifted onto the public. In virtually all cases, ratepayers and taxpayers have been saddled with the capital costs of building nuclear plants, which in some cases exceeded \$10 billion apiece. In total, about \$300 billion (in 2001 dollars) has been spent on nuclear plants, according to Charles Komanoff, an economist who researches nuclear power.

The public also picks up the tab for dealing with the reactors’ deadly radioactive waste, which the Department of Energy most recently estimated at \$58 billion. The cost of “decommissioning”—tearing down and cleaning up old, contaminated nukes once they wear out—also falls to us. As an indication of this bill, decommissioning the Yankee Rowe plant in Massachusetts, which is about one-seventh the size of the largest nuclear reactor now operating, is expected to cost almost \$500 million, says Paul Gunter, director of the reactor project at the Nuclear Information & Resource Service, a watchdog group.

On top of all that, nuclear utilities evade the lion’s share of the cost of a potential nuclear disaster. Under the federal Price-Anderson Act, originally passed in 1957 and up for renewal next year, a utility’s liability for an accident is limited to \$7 billion. Current estimates of Chernobyl’s costs, by comparison, exceed \$350 billion.

Sweep it under the mountain

In the 1950s, the federal government pledged that the public would inherit the nuclear industry's so-called "high-level waste" or "spent fuel"; the mildly radioactive uranium fuel originally loaded into the reactor core comes out 2.5 million times more radioactive. A Nevada state agency report put the toxicity in perspective: A spent fuel assembly out of the reactor core for 10 years would emit enough radiation to kill somebody standing three feet from it in less than three minutes. The public has already spent more than \$6 billion on high-level waste disposal, though no long-term storage system has yet been devised.

Spent fuel remains deadly for at least tens of thousands of years. In order to keep it isolated from the environment, nuclear planners came up with the idea of burying it deep underground. Only one site, Nevada's Yucca Mountain, is currently under consideration, and the Department of Energy is expected to rule on its suitability later this year.

Nuclear proponents claim that once there is a place to take the waste, the waste problem is solved. Only "politics" is standing in the way, they say. The **Christian Science Monitor** (1/22/01)—which erroneously placed Yucca Mountain in Arizona—quoted the Nuclear Energy Institute's Martin Fertel saying: "We want politics to be moved aside and let science, the data, and the regulatory process go forward." The **Monitor** follows Fertel's comment, writing: "Many in the industry suspect that the Clinton administration blocked action on this crucial site for political reasons—to win electoral support in Arizona."

After shortening the time that nuclear waste remains dangerous to "hundreds of years," the **Houston Chronicle** (4/17/01) declared Yucca Mountain "probably the most studied piece of real estate in the history of the world." It claimed the federal government says the environmental effect of the repository "will be so small as to have essentially no adverse impact on public health and safety," and concluded that "it remains to be seen if there is the political will" to go ahead with the site.

Despite these reassuring claims, Yucca Mountain is in an active seismic area, and growing scientific evidence indicates it is not likely to contain the 70,000 metric tons of spent fuel intended for 10,000 years of undisturbed storage. Scientists from the California Institute of Technology have discovered that the ground around the mountain is expanding at a much faster rate than what DOE had originally reported, indicating an increased risk of earthquakes and volcanoes, says Susan Zimmerman, a geologist with the Nevada Agency for Nuclear Projects. Furthermore, the mountain itself has proved to be very leaky; rain water flows through to the aquifer under the mountain in less than 50 years, picking up minerals that lab tests have shown are highly corrosive to the nickel alloy that DOE plans to use for the waste containers.

## Nuclear greenwashing

For more than 10 years, the nuclear industry has been promoting itself as a clean source of energy that, unlike fossil fuels, produces no greenhouse gases or air pollution. Now that global warming has gained more credence in the mainstream press, many media outlets tout this advantage: “Advocates like to claim nuclear power is environmentally friendly because it doesn’t contribute to global warming the way fossil fuels do” (**NBC**, 3/18/01).

Many media outlets pit fossil fuels against nuclear power, as if these choices are our only alternatives. The **Washington Times** (3/18/01) informed its readers that “unlike coal, natural gas and oil-fired power plants, nuclear plants are free not only of carbon emissions but also of other noxious gases like sulfur dioxide, mercury and nitrogen oxide that have made fossil-fuel burning plants the biggest sources of air pollution in the United States.”

While nuclear energy does not produce as much CO<sub>2</sub> or other greenhouse gases as, say, coal power, it’s inaccurate to call nuclear technology CO<sub>2</sub>-free. An enormous amount of electricity is used to enrich the uranium fuel, and the plants that manufacture the fuel in the U.S. are powered by coal plants.

The total impact on the greenhouse effect is not large—comparable to the impact of the processes that create renewable energy, in fact (Renewable Energy Policy Project, 4/00)—but uranium production does have a significant impact on another global environmental threat: ozone depletion. The EPA’s Toxic Release Inventory showed that in 1999, the nation’s two commercial nuclear fuel-manufacturing plants released 88 percent of the potent, long-lived ozone-depleting chemical CFC-114 by industrial sources in the U.S., and 14 percent of such discharges in the entire world (Louisville **Courier-Journal**, 5/29/01).

As part of their normal operations, nuclear reactors routinely emit radioactive gases and particles into the air. Clusters of cancers, birth defects and various immune disorders have been reported in surrounding communities by citizen groups, but they have not been confirmed because few, if any, resources are allocated to do the necessary studies, says Joe Mangano, national coordinator of the Radiation and Public Health Project.

### Selling safety

The failure of nuclear power in the U.S. is frequently attributed to an irrational public response to the 1979 accident at Three Mile Island, whose only real victim, according to the conventional media narrative, was the nuclear power industry. According to the **Houston Chronicle** (4/17/01), “no one died or was injured because of the release of radioactive material from the plant. More than 2,000 personal injury claims were filed. But after 15 years of litigation, none was upheld.”

**USA Today** (4/17/01) said the partial meltdown merely “leaked radioactive steam into the atmosphere.”

In truth, hundreds of residents living near the plant reported symptoms of radiation poisoning before the accident was even announced. Later, an unusually high number of both strange and common cancers and an array of other health problems started showing up among residents, particularly those living in the path of the radiation plumes that crept over nearby communities during the first few days of the accident. Hundreds of victims have settled lawsuits out of court, but the terms of their settlements remain secret. (See **Extra!**, 7-8/93.)

After considering the current high price of fossil fuels, mentioning that opponents have safety questions without identifying what they are, and remarking on the high-level waste problem, **NBC Nightly News** (5/3/01) asked if Americans were “over the scare that Three Mile Island created 22 years ago.” The answer came from a Georgetown University professor: “There’s no way around it, and therefore we have to cope with the consequences.” The reporter concluded that “with soaring energy costs, people will soon be more afraid of their utility bills than nuclear power.”

A **CBS Evening News** report (5/30/01) on nuclear power in France told viewers that “the giant cooling towers that symbolize some of America’s anxiety about atomic power are symbols here of self-assurance.” The reporter briefly mentioned concerns about waste and accidents, but ended the story by noting that Paris’ nickname, City of Light, came from “a reputation for progressive thinking.”

**NBC News’** March 19 report ended with the comment that “two decades ago, fear nearly crippled the industry.” But then the reporter reassured viewers that “now those fears have receded, and nuclear power could play a huge role in America’s energy future.”

#### SIDEBAR: New Designs, Old Dangers

To further quash fear in the masses, the nuclear industry is claiming that new reactor designs are “inherently safe” and virtually accident-proof. The most heavily promoted of these new designs, the Pebble Bed Modular Reactor (PBMR), features graphite-encased uranium fuel pellets about the size of billiard balls, and uses helium, instead of water, to cool the reactor; **Time** magazine (5/28/01) called it “practically meltdown-proof.” So far there are only two experimental PBMRs in the world (one in China and one in Germany). This design is said to be so safe that it does not include a steel-encased concrete containment building.

In its nuclear revival piece, the **Washington Post** (4/23/01) cited without challenge industry officials' claim that in case of an accident, "the reactor would come to a standstill, gradually releasing heat but not radiation." The CEO of Exelon, the nation's largest nuclear operator, asserted: "There is no conceivable way you get a Three Mile Island accident out of that design." For balance, David Lochbaum, a nuclear engineer with the Union of Concerned Scientists, was quoted as saying the design is in too early a stage for "a plus and minus analysis."

Interviewed by **Extra!** less than three weeks after this story appeared, Lochbaum seemed to have a very clear idea of some of the pitfalls, which do include the possibility of meltdown, due to the fact that graphite catches fire. (A graphite fire burned for 10 days at Chernobyl.) Lack of a containment structure would also make a PBMR much more vulnerable to a terrorist attack or other catastrophes. "Without a containment, you wouldn't need to have a meltdown to get the stuff all over the countryside," he said. "If the graphite caught on fire in a place without a containment, it could certainly blow like Chernobyl did."

Lochbaum says the use of helium in this design could result in increased radioactive air emissions and contamination of some of the plant's equipment. New pebble bed designs are different enough from the two existing experimental ones that there is some question about whether they would operate safely. But fears of future electricity shortages have sparked talk that companies should be allowed to build and operate pebble beds before they have any experience with them anywhere. Lochbaum responds that "nuclear experiments belong in the lab, not in our backyards."

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