

COMPARING PRIMARY SOURCES

On Nuclear Energy

Americans reacted to the use of nuclear energy in various ways. Some heralded it as a safe, inexpensive replacement for high-priced oil and “dirty” coal, while others felt the risks of nuclear power outweighed its benefits.

As you read the arguments for and against nuclear energy, look for a relationship between energy sources and economic growth.

FOR NUCLEAR ENERGY

Senator James A. McClure (R-Idaho), address before the National Conference on Energy Advocacy, February 2, 1979

When you debate the issue of nuclear energy, you are actually debating the issue of growth. Growth will be the key issue for the remainder of this century, and it is the resolution of that issue which will determine the lifestyles of most Americans for generations to come. . . . Economic growth has been inextricably linked to the growth of the supply of energy throughout history.

FOR NUCLEAR ENERGY

Anthony V. Nero, Jr., nuclear physicist with the University of California’s Lawrence Berkeley Laboratory, in Nuclear Power: Both Sides

The only practical requirement for nuclear power or any other energy technology is to diminish the chances of a big accident. If careful design and operation make the accident probability tiny enough, then nuclear reactors will be adequately safe. . . .

More detailed assessments of reactor safety began in the 1970s. To the surprise of many in the nuclear business, these studies indicated that accident probabilities were larger than engineers had previously thought. But the risk was still small compared with risks from other energy technologies, and smaller than many risks that the public accepts routinely. Reactors are carefully designed with numerous basic features and safety systems that serve to contain radioactivity, *especially* in an accident. With vigorous safety regulation, accidents will be highly improbable and reactors will be safe enough, even safer than most of the alternatives.

FOR NUCLEAR ENERGY

Bernard L. Cohen, professor of physics at the University of Pittsburgh, in Nuclear Power: Both Sides

Radiation consists of subatomic particles that shoot through space at enormous speeds, up to 100,000 miles per second. They easily penetrate deep inside the human body where they can . . . damage biological cells, and thereby cause cancer or genetic defects in later generations.

This sounds frightening, and one can easily get the impression that to be struck by one of these particles would be a tragic event. However, this cannot be so, because each of us . . . is struck by about 15,000 of these particles of radiation—from natural sources—every second of his life. . . . Any single one of these particles can cause a fatal cancer or a genetic defect in our progeny, but the probability that it will do so is only one chance in 30 quadrillion (30 million billion). . . .

[M]ost of us . . . recognize that life is a series of risks. Every breath of air may carry a germ that will cause fatal pneumonia, but we continue to breathe. Every bit of food may have a chemical that will give us cancer, but we continue to eat. Every time we get into an automobile we recognize that we may be killed in an accident, but still we drive. We are willing to engage in these games of chance as long as the odds are heavily in our favor. And in the case of radiation we should recognize that 30 quadrillion to one are pretty good odds. Unfortunately, however, that point is missed by some sensation-seeking writers who have produced pages of prose about the horrors of being struck by a particle of radiation.

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COMPARING PRIMARY SOURCES**AGAINST NUCLEAR ENERGY***Dr. Helen Caldicott, in Nuclear Madness, What You Can Do! (1980)*

The unfortunate truth is that nuclear operators are trained for only normal power operations and for the start-up and shut-down of the plant, not for the advent of accidents. . . . Although current law places sole responsibility for the safe construction and operation of nuclear plants on the utilities, typically, the utilities possess less nuclear expertise than the architectural/engineering firms who design and build the reactors and even the NRC [Nuclear Regulatory Commission]. After the licensing process is obtained by the firms and the NRC and the plant goes into service—the utility is on its own. . . .

If this country, and along with it the rest of the world, continues to rely more and more on nuclear power, a meltdown disaster is almost predictable, and when it does occur, disaster and chaos from the medical and psychological effects as well as the shutdown of electricity from all nuclear power plants will be the result. For years now, the utilities and nuclear power industry have refused to listen to scientific logic and reasoning concerning the dangers of this technology. . . . [P]erhaps it is time for emotion and for passion and for commitment to stir our souls and our hearts and our minds once again into action.

AGAINST NUCLEAR ENERGY*Richard Swartz, Middletown Council meeting, June 20, 1979*

We're here because we feel endangered, and the next generation, and the next century, and their children. That's why we're here. Ladies and gentlemen, as long as there's faulty equipment operating in a nuclear power plant, as long as we have management and utility companies who care more for money than people, as long as there is the possibility of human error in the operation of nuclear power plants, considering Metropolitan Edison's [Three Mile Island nuclear plant operator] past record and the fact that no one can any longer trust the people who control the nuclear situation in crisis events and in the day-to-day operation of these plants, I petition you tonight to not only slow down the reopening of Metropolitan Edison's Three Mile Island plant, but to close it down permanently. . . .

Someone's going to die. Eventually there's going to be a disaster. You know it, if you don't shut them down. I don't want it to happen here. . . . For once, don't let them dictate to you. Don't listen to the big national corporations. Don't listen to the big national government that can't, that doesn't touch you anymore. Ladies and gentlemen, be Americans. This is our town. This is our land. And these are our kids. Don't let them down.



1. According to Senator McClure, what role does nuclear energy play in the economic growth of the United States?
2. What regulatory flaws in the nuclear industry does Dr. Caldicott identify?
3. **Making Comparisons** Contrast the different views expressed here on the risks associated with nuclear power.