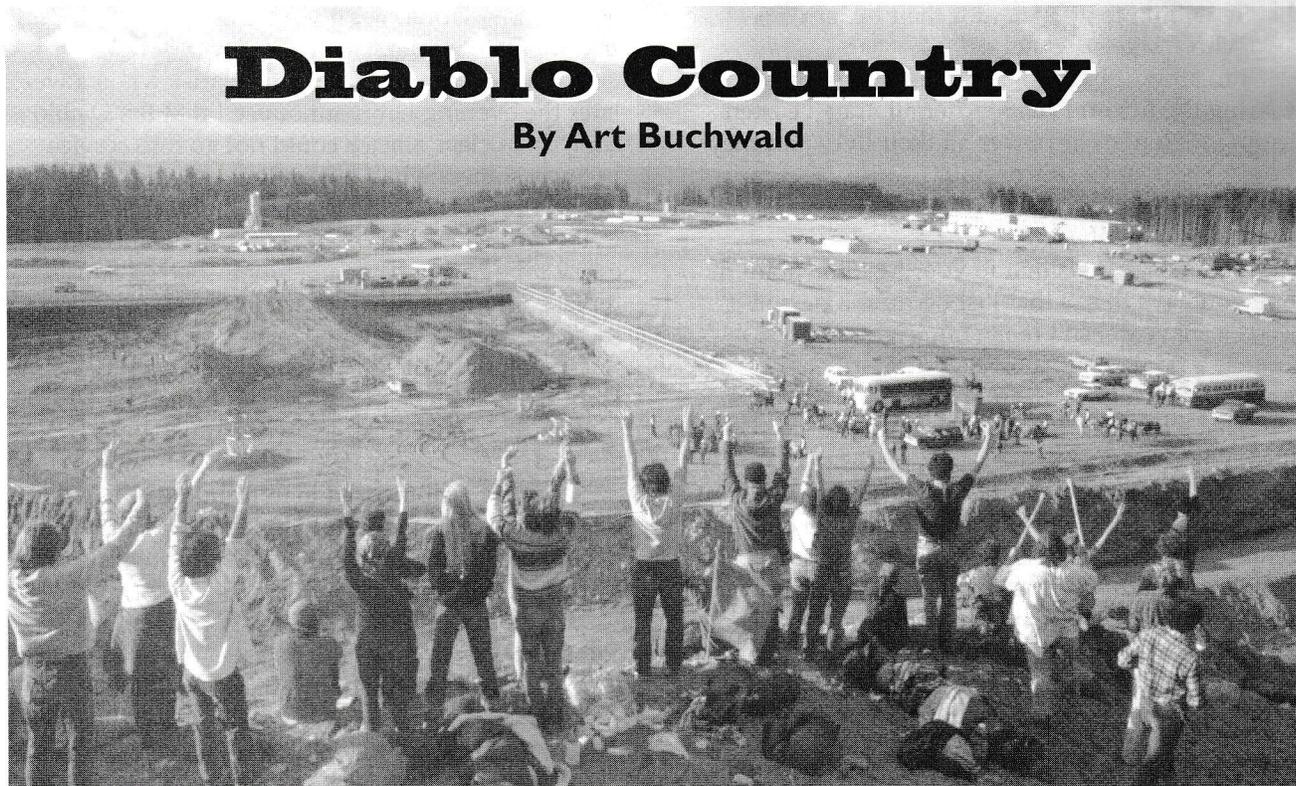


Read the articles "Diablo Country" and "Nuclear Energy" and answer Numbers 11 through 20.



Diablo Country

By Art Buchwald

Anti-nuclear demonstrators stand above the Satstop Nuclear Power Plant Site with arms raised in protest.

I pride myself on having a very open mind on things such as nuclear energy as long as they don't build a plant near my home.

So when I saw the Diablo Canyon demonstration in California a while ago, I watched it with the calm impartiality which I reserve for all things that don't affect me personally.

On one side were scruffy, unshaven, unshod protestors. On the other were well-dressed state troopers and clean, good-looking spokesmen for the power company. The dispute as I understand it, was the scruffy unbathed people claimed that the people in the white hats didn't know what they were doing. They had built a billion-dollar nuclear plant near the San Andreas fault, which everyone says is going to cause an earthquake in California sooner or later.

My wife, who doesn't know the first thing about nuclear energy, asked me one evening as we

watched the scruffies being hauled off in sheriffs' vans, "Why would they build a nuclear plant next to an earthquake center?"

"Because it obviously makes sense. The people who construct those plants know what they're doing. If you had been listening to the nice, clean-cut men in white shirts, ties, and dark suits, you would know that the power company has done exhaustive tests, and the nuclear plant can withstand any earthquake shock known to man. Besides, we have a Nuclear Regulatory Commission that has the last word on whether a plant is safe or not. They would never have given their OK to open one if there was the slightest question that building a nuke plant next to an earthquake fault could hurt the environment."

"Then why are the people in the scruffy clothes willing to be arrested for trying to close down the plant?" she asked.

"Because they have an unrealistic fear of nuclear power. They don't understand it, and therefore they're against it. Many of them are students who enjoy getting involved in civil disobedience. But they're willing to go to jail for their beliefs."

"Whose side are you on?"

"I'm afraid I have to be on the side of those wearing the ties and coats. After all, they've been dealing with nuclear power all their lives and they should know if it's safe or not."

"A few years ago, you would have been on the side of the unwashed."

"I guess age does that to you. At some point in time you have to say that just because a person needs a shave doesn't make him right-and just because a person has short hair and dresses properly doesn't make him wrong."

"That's a stupid reason for taking one side over the other."

"There's more to it than that. The people who build nuclear plants are scientists, trained in our finest technical institutions. They work with computers and consult with famous experts who have an answer for every problem. The engineers and designers take extraordinary steps to see that not one bolt is put in wrongly. If they say a nuclear plant can survive an earthquake, I have to accept their word for it."

"This is not to say I am unsympathetic with the poor souls who are willing to go to jail because they lack faith in our great scientific establishment. But in this case, I believe they're making a mountain out of a molehill. I would bet my All Savers Bank Account that they are wrong."

Well, you can imagine my surprise when a week later the evening news announced that the Diablo Canyon nuclear reactor could not go into service because someone had gotten the drawings all mixed up, and the wrong pipes had been installed in the wrong sections of the plant. It meant that every pipe had to be personally inspected and replaced if it was discovered that it didn't belong there.

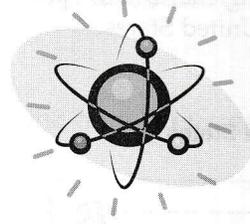
A man from the power company in a nice white shirt, tie, and blue suit explained it wasn't a very serious mistake and could have happened to anybody.

Another well-dressed man from the Nuclear Regulatory Commission said he was appalled at the sloppy engineering and was ordering an immediate investigation.

They didn't put on any scruffy people for comment. I wish they had, because I wanted to find out where to send them my All Savers Bank Account.

Nuclear Energy

From *Environmental Science*



The Nuclear Age began on July 16, 1945, when the first atomic bomb exploded over the New Mexico desert. The technology that created the bomb led to the development of nuclear reactors. By 1953, nuclear reactors were powering electric generators. At that time, a future was envisioned in which the world was freed from its dependence on fossil fuels by the new "cheap" source of energy provided by splitting the atom. Nuclear power plants were soon under construction or planned for construction throughout the United States and in many other industrialized nations. However, unforeseen problems have diminished the dream of a future powered by nuclear energy.

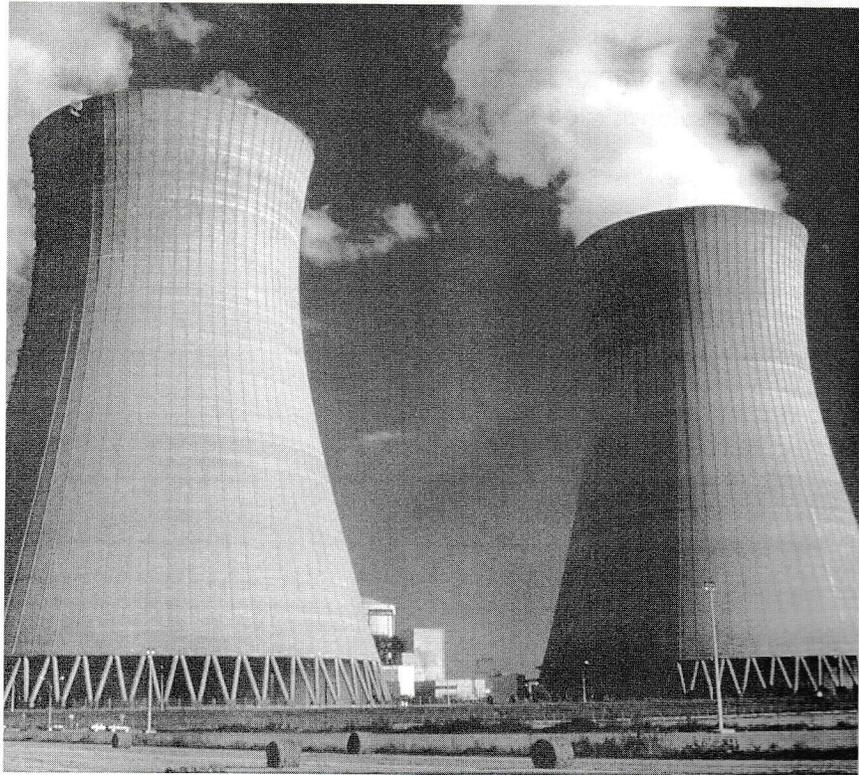
At first, electricity produced by nuclear energy was much cheaper than energy derived from fossil fuel. But operating costs have risen rapidly, and electricity from nuclear power plants is now more than twice as expensive as that produced by other fuels. From 1970 to 1975, in the United States, plans were filed to build an average of 12 nuclear power plants per year; from 1975 to 1978, the number dropped to 9 plants per year. Since 1978, no new plants have been planned and several that had been planned were canceled.

Several factors have contributed to the decline of the nuclear industry in the United States. The main drawbacks to

nuclear power are increased construction costs, public opposition to nuclear power, and concerns about safety and disposal of spent fuel. There are 110 nuclear plants in operation in the United States, most of them located in the eastern part of the country. Approximately 29 percent of our energy production comes from nuclear power.

By 1985, nuclear power generated 18 percent of the

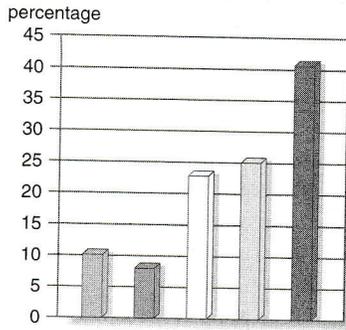
electrical power in the world. In some industrialized nations, the use of nuclear energy is very high. France, for example, generates more than 65 percent of its electrical energy with its 60 nuclear reactors. However, developing nations cannot afford this expensive power source. Fewer nuclear plants are now being constructed, and attention is focused on other means of electrical energy generation.



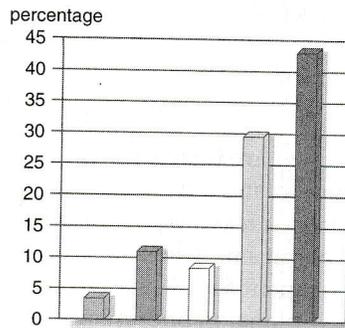
Nuclear reactor in the Loire Valley, France. The reactor is a device for producing a controlled release of nuclear energy. The fission of atomic nuclei produces a chain reaction.

The following charts show power usage for the states of New York and Ohio as well as averages for the entire United States.

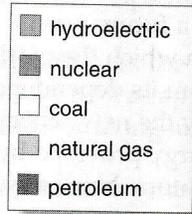
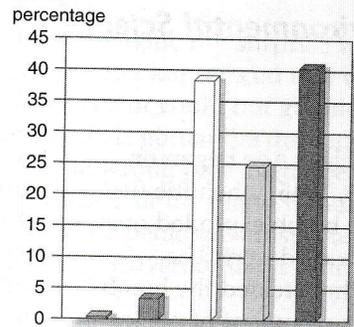
Entire United States



New York



Ohio



Answer questions 11 through 20. Base your answers on the articles "Diablo Country" and "Nuclear Energy."

- 11 According to the second article's graphs, what can we infer about the type of energy used in different locations?
- A. Ohio prefers nuclear power to any other source.
 - B. New York has more nuclear power plants than Ohio and the U.S. in general.
 - C. Coal is more available in New York than in many other parts of the United States.
 - D. Hydroelectric power and nuclear power are used in equal amounts in most parts of the United States.

12 What would be another good title for the "Diablo Country" essay?

- F. San Andreas Power Plant Under Scrutiny
- G. Diablo Goes Nuclear: Is It A Good Idea?
- H. Inside Information on Nuclear Power Plants
- I. An Old Man's Perspective on Nuclear Power

13 **READ**
THINK
EXPLAIN What details support the idea that nuclear power plants may sometimes be the wrong choice for supplying power? Use details and information from both articles to support your answer.

- 14 Which statement best supports the idea that nuclear power is an expensive source of energy?
- A. The same technology that created the atomic bomb helped develop nuclear power, making it costly.
 - B. Public opposition to nuclear power and concerns about safety has driven up the cost of nuclear power.
 - C. High operating costs of nuclear power plants and the high cost of the electricity it produces make them expensive.
 - D. Lawsuits resulting from nuclear accidents make insuring nuclear plants an almost impossible and expensive undertaking.

- 15 Read the following sentences from "Diablo Country."

On one side were scruffy, unshaven, unshod protestors. On the other were well-dressed state troopers and clean, good-looking spokesmen for the power company.

What does *scruffy* mean?

- F. immaculate
 - G. untidy
 - H. violent
 - I. well-groomed
- 16 In the first article, what is the author's opinion of the protestors?
- A. They were clean, well-spoken and therefore right about power plant.
 - B. They were messy, looking for trouble, and had no basis for their fears.
 - C. They were young and irresponsible, and therefore had no concern for others.
 - D. They were well-educated scientists who understood the world of nuclear power.
- 17 What method does the author use to organize the second article?
- F. spatial order
 - G. cause and effect
 - H. comparison and contrast
 - I. argument and support

