
SCIENCE & TECHNOLOGY

Plastic manufacturing is now a \$23 billion-a-year business in the United States. Mark foresees the application of plastics to ever more specialized uses—as wire-like electrical conductors, or as ingredients in replacement bones and arteries for humans.

RESOURCES & ENVIRONMENT

*Gauging the Need
For Electricity*

“Lights Out in the Year 2000?—It Depends on Whose Forecast You Believe” by Rochelle L. Stanfield, in *National Journal* (Apr. 14, 1984), 1730 M St. N.W., Washington, D.C. 20036.

Americans take electricity almost as much for granted as they do the air they breathe. “Flick the switch,” says *National Journal* correspondent Stanfield, “and the lights are sure to go on.” But in Washington and at utility company headquarters around the country, specialists are debating how to ensure that the lights will still go on during the next century.

The problem: Nobody agrees on how much electricity will be needed. In a 1983 study, the U.S. Department of Energy predicted a dramatic increase in consumer demand for electricity by the year 2000 and recommended a \$1.8 trillion building program to nearly double the nation’s generating capacity. But environmentalists and “public interest” consumer groups say that the hundreds of new nuclear and coal-fired power plants called for would be too costly and too dirty. They point to a 1983 study by the Congressional Research Service. It concludes that sharp increases in energy conservation would eliminate the need for *any* new power plants.

Cautious utility company executives are caught in the middle. Prior to the 1973 Arab oil embargo and subsequent price increases by the Organization of Petroleum Exporting Countries (OPEC), utilities could count on about seven percent annual growth in demand for electricity and plan expansion accordingly. But after 1973, homeowners and industry cut back sharply on electricity use. Since 1972, America’s power companies have canceled earlier plans to build 143 new nuclear-, oil-, and coal-powered generating plants, but plans for many other new plants have not been shelved. U.S. power companies are now capable of generating “half again as much power as the 20 percent cushion above demand considered to be a prudent reserve.”

Future demand for electricity is “notoriously hard to forecast,” notes Stanfield. During the 1970s, demand grew by about 2.5 percent annually. But last year it jumped by 5.5 percent. The utilities, once burned, are reluctant to embark on an ambitious expansion program. Says Stanfield, “Most experts still foresee an excess of electric capacity.”

The utilities’ luck has not been all bad, Stanfield adds. The mistakes of the 1970s have left them with enough surplus generating capacity to provide a “grace period” before they have to make tough decisions about what to do next.