

## AEC: Commitments to come

At the end of 1965, less than one percent of the nation's electric power came from nuclear power plants. That was sufficient, however, to show nuclear power to be competitive with coal- and oil-fueled plants. Consequently, during 1966 more than half of the country's newly ordered electric capacity was nuclear, and the proportion decreased only slightly in 1967.

The trend towards nuclear power is so strong now that the Atomic Energy Commission and industry predict that

The AEC plan spells out what needs to be done and establishes priorities for doing it.

The plan calls for the AEC to get a commitment in 1970 from a reactor manufacturer and a utility, or group of utilities, for the construction of a demonstration plant of about 300-megawatt size. The plant would cost between \$60 million and \$100 million to construct, with an equal amount going to research and development needed to design the plant. Under its new plan, the AEC, with Congressional approval, would put up some \$80 million for the research and development. A total of three demonstration plants spaced out over two-year intervals would receive AEC support.

Based on the technology developed in the demonstration plants, the AEC plans to build a commercial plant of about 1,000 mw in the late 1980's. The total endeavor, according to AEC estimates, will cost over \$1 billion in Federal and private funds.

According to the AEC, the technical feasibility of the concept has already been established. However, there are numerous technical problems that must be overcome before a commercial plant can be built, including safety, high plant reliability, and economic fuel cycle.

Safety is the AEC's first consideration. Its goal as stated in the plan is to enable the designer of a commercial plant to "demonstrate that the probability of any major accident is very

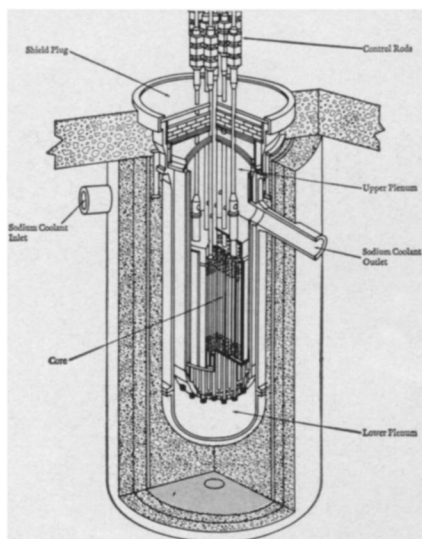
small and that minor accidents and mishaps cannot snowball into a major occurrence." A normal problem with any pioneering nuclear facility, safety is especially a problem with the breeder reactors. (SN: 8/26/67, p. 200).

Operating reliability of the reactor and the remainder of the power plant must be high. The AEC plan says the plant must be "available for operation 80-90 percent of the time." This again can only be assured by actual operating experience.

An economic fuel cycle has to do with the doubling time of plutonium—the time it takes the fast breeder to produce an amount of fuel equivalent to the amount it began with. Doubling times of 10 years are the maximum that will give fuel-cycle costs that are insensitive to the price of fuel material.

The country's reactor manufacturers and the major utilities have been working on fast breeders for over twenty years. They have already chosen up sides in the competition to build the first demonstration plant. General Electric Co., for example, is teamed up with a group of New York utilities known as ESADA; Westinghouse Electric Corp. is working with 21 electric utilities and Commonwealth Associates. Both groups have done research and development aimed at committing themselves to a 200-400 megawatt demonstration plant in 1970, right in phase with the AEC plan.

These industry teams are eager to get a commercial plant as soon as possible because of foreign competition, and they will no doubt welcome AEC's help.



Westinghouse Electric Co.

*Cutaway of prototype fast breeder.*

by 1980 nuclear power will produce between a fifth and a quarter of the country's projected total electric power capacity of 500,000 megawatts.

Unfortunately, the expansion in nuclear power could eat up the country's supply of low-cost uranium by 1990.

The problem is that light water reactors in present nuclear power plants use uranium inefficiently, burning less than one percent of the mined uranium. The solution is a fast breeder reactor, now being developed, that uses about 70 percent of the mined uranium by converting it under neutron bombardment to fissionable plutonium.

So great is the potential of the fast breeder reactor for reducing costs and preserving uranium that an all-out effort to speed its commercial development was repeatedly called for at the World Energy Conference held in Moscow this summer.

To insure that the United States develops a fast breeder reactor in time to meet world competition (see p. 328), the Atomic Energy Commission has issued a 10-volume master plan calling for the development of a commercial fast breeder power plant by the 1980's.

## CROCKS AND CRUDS

### Drugs, doctors and detail men

In hearings last week before the Senate Small Business Monopoly Subcommittee, Merck & Co., one of the largest drug houses, was charged with issuing seriously misleading bulletins to its salesmen, or detail men, who advise doctors on prescription drugs and their effects.

"It is obvious that Indocin will work on that whole host of rheumatic crocks and cruds which every doctor sees daily," the salesmen were told to tell the doctors, according to subcommittee testimony. Indocin is a potent anti-arthritis compound known to have serious side effects.

Food and Drug Administration spokesman Robert S. McCleery testified that the cracks about crocks and cruds "reflect disquieting attitudes of the firm's employees toward the medical profession and to the patient."

Just before the hearings began, the Department of Health, Education and

Welfare last week charged the nation's drug-makers with:

- Over-pricing.
- Wasting scientific talent (and \$500 million-a-year) on me-too or duplicative products.
- Inundating physicians with biased advice about new drugs.

These two latest skirmishes in the Government's running battle with the industry—it has been going on hotly since the Kefauver-Harris hearings in 1962—take on new urgency as Congress debates the inclusion of prescription drugs in Medicare benefits. (The Government already spends \$300 million a year on drugs.) Last year action on bills authorizing payment for prescriptions by generic names was delayed, in part, to await the outcome of the HEW investigation of the issue of cost versus quality (SN: 12/9/67, p. 559). The outcome—resounding indictment—seems to point toward generic