

Manufacturers of nuclear reactors such as General Electric, Westinghouse and North American Rockwell's Atomic International, have been eagerly awaiting this word since the mid 50's. They want to move now faster than AEC is willing to let them.

The AEC ultimately hopes for three plants to be completed—in 1976, 1978 and 1980—but its present plans concern only the first plant, which is to produce 300 to 500 megawatts of power.

Potential contractors will submit their proposals by July 28. The proposals will detail information about the size of the technical and economic risks involved in building the plant, possibilities of alternate sites, necessary research and development and testing, examination of codes and standards and site and safety analyses.

The AEC plans to award two or more contracts for this first evaluation study, which will take about a year. The winners then become eligible to construct the demonstration plant. Only one company will be selected to do the construction, and it must be associated with a utility company or group, which will operate and maintain the plant.

The total amount requested by the AEC for the companies to make their study is \$4 million, although it has yet to be authorized and appropriated by Congress.

The AEC is following the usual procedure for Government-sponsored power plant construction, a gradual progression from the experimental to the small to the large. The state of the art for the breeders, bolstered by experiments at Idaho Falls and other nuclear facilities, has developed the liquid

metal design to the point where the AEC has decided to leave the experimental stage and go to the demonstration plant, which will supply electric power to a community. At present, the breeders are still at the experimental stage. They are producing plutonium but none is generating electric power for consumption.

However, if the AEC has progressed in the technical area, some industry people charge it is dragging its feet in another. The accusation stems from the AEC plan to award one contract at a time for each of the three demonstration plants instead of giving out all three simultaneously. The AEC procedure means that separate proposals will have to be submitted all over again for the two other plants.

The commission defends its policy on the grounds that:

- There are not enough trained personnel on hand to design and construct all three.
- The budget does not permit simultaneous contracts. (The \$4 million represents a cutback from \$6 million out of a possible Government contribution of \$80 million for the first plant.)
- By staggering the plants, the AEC makes it possible for each succeeding contractor to profit from the experience of his predecessor.

Daniel J. Shiller, in charge of handling the contracts for the AEC, points out that spacing the proposals will protect against duplication of effort. For example, if three companies are working simultaneously, they might all expend part of their design effort in one area, such as a heat exchanger or a coolant pump, where one team would be sufficient.

Shiller sees the present AEC call for the studies as a positive contribution. "Its intent," he says, "is to try to insure the success of the demonstration plant. It will give the parties a better feel for what they're getting into."

Still, not all industry people accept the AEC reasoning. John J. Flaherty, president of Atomic International, was quoted in NUCLEAR INDUSTRY magazine as saying, "We suggest that a much more logical approach would be the simultaneous construction of two or three plants. Not only will simultaneous starts be a greater spur to competition in the industry, but they should also bring the breeder to commercial status in a short time."

Dr. A. Eugene Schubert, vice president and general manager of General Electric's Nuclear Energy Division also takes exception to the choice. "General Electric has an adequate number of highly qualified technical personnel trained and available in a well-established separate organization capable of designing and constructing breeder plants," he says. He also feels that if there is more than one initial demonstration plant—and he thinks there should be—it is unlikely that the Government's contribution to each plant would be as high as \$80 million.

"The present call for proposals possibly could ask industry to retrace steps it already has taken," he adds, "but that judgment will have to be deferred until a thorough study of the proposals can be made."

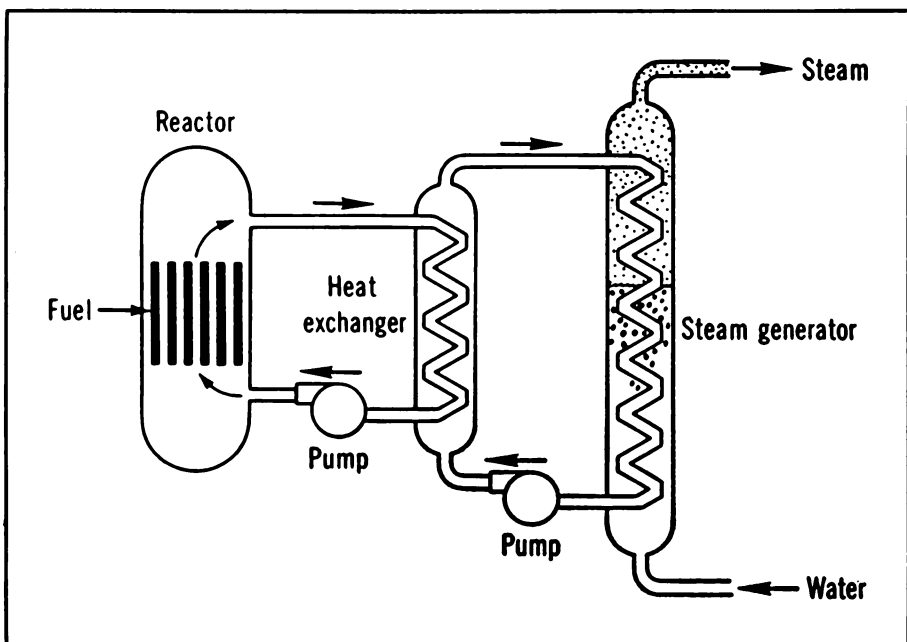
This invitation for proposals is the fourth of its kind since 1955. The first three invitations were for a thermal reactor-type of power plant, which employs relatively slow-moving neutrons. This fourth invitation is for a nuclear reactor employing fast neutrons, which are required for the production of plutonium from U-238.

DEMANDS OF THE POOR

Social workers move

Professionals in the field of public assistance have been held back through the years in serving the poor by red tape and lack of funds. They felt thwarted by inadequate welfare systems.

When 7,000 professionals gathered at the National Conference on Social Welfare in New York (SN: 6/7, p. 549) they intended to discuss "An Action Platform for Human Welfare." Their attempts to come to grips with the problems of social change were both challenged and spurred as welfare clients and militant civil rights advocates forcibly interrupted their meetings. And a new definition of the position of the social worker appeared to be emerging,



AEC

Liquid metal cools reactor by transporting heat away to change water to steam.

reflecting, rather than guiding, the demands of the poor.

Members of the National Welfare Rights Organization, the National Association of Black Social Workers and the National Federation of Social Work Students voiced bitter complaints against present laws. They emphasized non-performance of the member organizations of the conference in bringing about action.

Although, at times, their actions rang of revolution, their ideas were essentially those expressed by the majority of the social workers present. The difference was in the method.

"This national discontent has permeated and descended upon the deliberations of this conference," remarked Livingston L. Wingate, executive director of the Urban League of Greater New York. Asking for reform of the welfare system, he urged that the conference go on record "with a firm pledge to give full support and resources to the organizational efforts of the welfare clients" (the National Welfare Rights Organization).

A desire for a standardized Federal public assistance level was voiced in all areas of the conference: from the militant Welfare Rights Organization to outgoing conference president Dr. Arthur S. Flemming, from a small meeting involving the poor in San Antonio to incoming president Wilbur J. Cohen. And at the same time New York's Mayor Lindsay was meeting in Washington, D.C., to push for new Federal assistance programs.

The executive board of the confer-

ence did not stop the intrusions of the outspoken groups; it listened.

By the third day of the conference, the board met to consider specific demands made by the National Association of Black Social Workers. It agreed:

- That the 1970 meeting should center on the problems of white racism and poverty.

- That a council be established in Washington to influence the direction of all national welfare policies.

- That schools of social welfare should become more relevant to minority groups by a marked increase in the number of their members on faculties.

- "To repudiate suppression, oppression and brutality against black and brown people and other minority groups wherever and whenever they occur."

- That there be a sharp increase in the representation of minority groups, including Indians and Asiatics, in the national conference.

As an immediate step the National Association of Black Social Workers, the National Federation of Social Work Students and the National Welfare Rights Organization were invited by the board to appoint representatives to the board.

Wilbur J. Cohen, the incoming president of the conference, held a firmer view in dealing with the militant groups. He said that the conference "should not be threatened with extinction by any group, no matter how well-intentioned." But he also urged that the members of the organization put more energy into affecting Congressional decisions on national welfare issues.

SPACE ASTRONOMY

New directions coming

From time to time the managers of the United States space program have received the advice of astronomers. Sometimes it has been individuals with a particular project in mind; sometimes informal or formally constituted groups have presented programs.

It was such contributions from the scientific community that made the Orbiting Astronomical Observatory one of the National Aeronautics and Space Administration's most successful scientific efforts. The satellite has become a legitimate observatory (SN: 4/12, p. 349), with time on the instruments shared by astronomers as it is at ground-based installations.

In an effort to extend this partnership, NASA assembled a panel of prominent astronomers under its own aegis, and is about to receive in return a 15-year program of space-based astronomy, and an array of directions chosen to reflect astronomers' ambitions. Such direc-

tions, when the report is issued in the next month or so, are likely to include the launching into orbit of 120-inch telescopes, the landing of a weather station on Mars and a major effort in infrared astronomy to complement the successful OAO work in the ultraviolet.

The NASA Astronomy Missions Board under the chairmanship of Dr. Leo Goldberg of Harvard University, is distinguished from its predecessors, says Dr. Robert Doyle of Harvard College Observatory, who describes himself as "a kind of scientific secretary to the board," by being inside the NASA house. In the past NASA has asked advice from outside organizations such as the National Academy of Sciences Space Science Board. The implication is that NASA seems more likely to respond to new directions proposed by a board convened in its own name.

The Astronomy Missions Board has had longer to work than its predeces-

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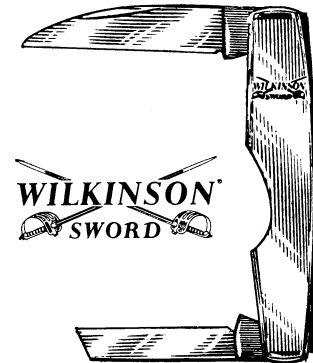
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