financial assistance a sufficient inducement to proceed with expensive reactor development on a sizable scale? The answer seems to be a qualified "yes."

Obsolescence Feared

Reports from Europe have indicated that many producers of electric power were reluctant to invest large sums in types of reactors that might be surpassed in efficiency in a short time. This reluctance, along with other factors—for example, the changes in the European power-supply situation since Euratom was conceived, during the oil shortage coincident with the Suez crisis—has threatened to upset the schedule originally devised for European nuclear development. The Euratom pact, an "agreement for cooperation," provides that the proposed reactors should be in operation by 31 December 1963. Under provisions of an exemption, completion of two reactors may be deferred until 1965.

According to this time schedule, if there is follow-through on all five letters of intention, there should be at least three power reactors in operation in Europe by the beginning of 1964. It remains to be seen whether this amount of activity will be sufficient to convince American legislators that financial aid for the Euratom program should be continued and expanded. Recently, the Joint Congressional Committee on Atomic Energy proposed that there be a substantial slowing down of U.S. aid to the research and development aspect of the program, on the grounds that Euratom has fallen behind schedule. How the committee will view the receipt of the five letters of intention, as an index of European interest in the total program, is yet to be seen. A critical test will come in September when definite, obligated projects, rather than letters of intention, will be called for by the Euratom administrators.

National Science Foundation's Budget Cut by House

The House of Representatives cut $17 million from the National Science Foundation's requested budget of $160 million for fiscal year 1960. The cut, which may be partially restored by the Senate, leaves the foundation with $143 million—an insufficient amount, according to the director, Alan T. Waterman, to ensure adequate government support for basic scientific research. The foundation had originally requested $206 million, but the Bureau of the Budget lopped off $46 million in line with the Administration's balanced-budget policy.

On the House floor almost no debate followed the introduction of the Appropriations Committee recommendations, and no member of the House urged that the sizable cut be restored. The members simply approved the committee's action. Apparently, there was general agreement with Representative Joe L. Evins (D-Tenn.) of the Appropriations Committee when he said, "The committee is impressed by the importance of science in the modern world, but it does not believe we should issue a blank check to the Foundation. An increase of $9 million over the funds provided last year should provide a substantial increase in NSF activities."

The House cut left some programs of the foundation intact, with appropriations at the level deemed necessary by NSF officials. Among the programs that might have to be curtailed if the cuts remain, according to Waterman, are research studies on weather modification, plans to continue and enlarge programs for translating Russian scientific works, and proposals to support a larger percentage of the research projects that are submitted to the foundation each year. The effect of the cut will be particularly serious in this last area, foundation officials say. The $60.5 million approved by the House for these basic research grants is, according to the director, "inadequate to meet the Foundation's objective."

Other House Action

In other budgetary developments, the same House Appropriations Committee approved $17.25 million for research and technical services at the National Bureau of Standards. This is an increase of about $5 million over last year's authorization. These funds will allow the bureau to buy six new field stations that are now operated under lease and to build another wing at its Boulder, Colo., station.

Another division of the Commerce Department, the Weather Bureau, received $49.85 million from the House committee to support its activities in fiscal 1960. Last year's figure was $45.24 million. These funds were authorized with the stipulation that 24-hour weather station operations at major airports be restored. During the past two years the bureau has had to cut down on weather services at 51 airports around the country. With the funds authorized by the committee, around-the-clock service will be resumed at 13 of these stations.

The House's action on these budgetary matters is only the first round for the various federal agencies involved. The cuts and the increases must be passed on by the Senate, and the actions of House and Senate, if different, must be reconciled before the final money authorizations are made. In its appropriations for science and technology the Senate tends to be a little more generous than the House. Because there has been no particular criticism of the House action by members of the Senate, there is reason to believe that there will be no drastic revisions of the various appropriations when the Senate acts.

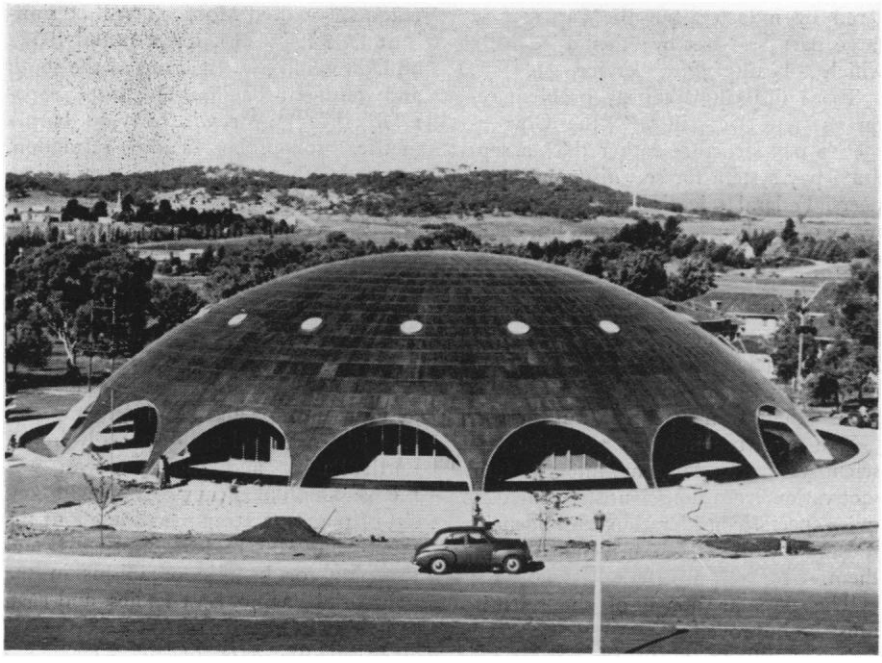
Australian Academy of Science

Scientists in various fields of international scientific endeavor will have observed that Australia has been represented by the Australian Academy of Science in arrangements for participation in the International Geophysical Year, for the Symposium on the Chemistry of Natural Products in Australia in 1960, for the specialist Conference on Haematin Enzymes in September 1959, and for activities of the Pacific Science Association and Pan Indian Ocean Science Association.

The Australian Academy of Science is a relatively recent establishment. Prior to 1954 Australian science had been represented in international activities by the Australian National Research Council. This council, which was formed in 1919, particularly to provide for Australia's participation in the International Research Council, acted for many years as the top representative body of science in Australia. Many Americans will recall the activities of the council, perhaps chiefly in connection with its participation in Pacific Science Association affairs and for its long and successful program of anthropological research.

Over the years the National Research Council had widened its membership to include leaders in the social sciences as well as in the natural sciences. By 1951 there was a strong feeling that the natural sciences needed a body of men, distinguished in their respective fields, to foster the pursuit of the natural sciences in Australia and to represent Australia in the increasing international activities. The social scientists were also ready to form a separate organization, now known as the Social Science Research Council.

The Australian National Research Council agreed to the suggestion that two entirely new bodies should be formed and that the old Research Council should be disbanded. The initiative in the natural sciences was taken by a group of 12 fellows of the Royal Society of London, resident in Australia, who invited 11 other scientists of high standing to join them. These scientists became the Foundation Fellows of the Australian Academy of Science and received a sympathetic hearing from the Prime Minister, the Right Honorable R. G. Menzies, who promised financial support



The new Australian Academy of Science Building in Canberra.

to launch a vigorous academy. With the help of the Australian Government and the Royal Society of London, the group of founders obtained a Royal Charter which established the Australian Academy of Science as a body with proper legal status and adequate prestige. In the early part of 1954 Her Majesty Queen Elizabeth II visited Australia and was graciously pleased to present her charter to the provisional council of the academy at a simple ceremony at Government House, Canberra, on 16 February 1954, thus following the precedent of King Charles II, who presented his charter to the Royal Society of London in 1662.

The charter required that the academy should be enlarged to at least 50 fellows within 3 months. Six fellows, distinguished for their achievements in the natural sciences, are elected annually, and the total fellowship is now 81.

The first task of the academy was to take over, from the National Research Council, Australia's representation in international scientific affairs. An early duty was the organization of Australia's participation in IGY and, as an indication of the confidence in the young academy, the necessary grant from the Australian Government was provided. The coordination of Australia's scientific resources for IGY was placed in the hands of a national committee and carried out on an honorary part-time basis.

The academy has a general policy of supporting other Australian scientific bodies, such as the professional bodies. The question of an academy publication was considered, but it was decided to support existing publications rather than to start a new one. In particular, there is a group of eight journals—for example, the *Australian Journal of Physics*—whose scientific direction is in the hands of a Board of Standards appointed jointly by the CSIRO (Commonwealth Scientific and Industrial Research Organization) and the Academy of Science.

Not all the activities of the Australian Academy of Science can be listed here. The academy continues to have the confidence of the Australian Government and is consulted on questions of scientific policy. Like its counterpart in the United States, the academy has its headquarters in the national capital. A new building to house the academy, in contemporary (and, in some quarters, controversial) design was opened in May.

J. DEEBLE
Australian Academy of Science, Canberra

Engineering Enrollment Falls, Teachers' Salaries Rise

Freshman engineering enrollment has declined markedly for the first time in 8 years. Furthermore, one out of five engineering schools expects a further drop in freshman enrollment next fall. In 1958, 70,029 engineering freshmen enrolled in the nation's schools, as compared with 78,757 in 1957, a drop of 11.1 percent. However, total college freshman enrollment in this country continued to increase, having risen nearly 7 percent over the previous year.

These facts were announced recently by the Engineers Joint Council, which reported on a special survey of its Engineering Manpower Commission that had been conducted in cooperation with the American Society for Engineering Education. The study, *Trends in Freshman Engineering Enrollment,* covered 223 institutions in the United States that grant degrees in engineering.

According to the heads of the engineering schools, applications of qualified students fell for three reasons: (i) because of a false appraisal of the long-range engineering career opportunities on the part of counselors, students, and parents, based on reports in the general press on reduction of company engineering complements during the 1957–58 recession period; (ii) because of increased concern about rigors of the engineering curriculum; and (iii) because of increased interest of potential engineering students in other scientific fields resulting in diversion of students to other educational pursuits.

The Engineering Manpower Commission survey was under the direction of a four-man committee, which included H. H. Armsby, chief for engineering education, Office of Education, U.S. Department of Health, Education and Welfare; D. S. Bridgeman, consultant Engineering Manpower Commission; R. W. Cain, project director, Scientific Manpower Studies, National Science Foundation; and L. K. Wheelock, executive secretary, Engineering Manpower Commission.

Teacher's Income Studied

Another recent study by the Engineers Joint Council shows that the average professional income of engineering teachers in the United States has risen 8.3 percent since 1956 and their basic teaching salaries have increased 13.5 percent over the 2-year period. The survey covered more than 5000 engineering teachers, or about half of the teachers in this field in the United States.

By the nature of their occupation, engineering teachers must do research; therefore, they earn more than basic teaching salaries. Thus, the average total professional income of engineering teachers, which was $8862 in 1956, was $9598 in 1958. The basic salary average rose by $894 per year, but there was a decline of 7 percent in outside income. For deans and department heads, however, there was an increase in both teaching and outside income.

The total income of engineering teachers in public institutions rose more than the total income of those in privately supported institutions. Engineering teachers holding advanced degrees earned more. In general, the survey