

## Record Salaries for Scientists and Engineers Battered by Inflation

Salaries paid to scientists and engineers hit record levels during 1979, but high inflation rates eroded most of the gains in purchasing power, according to the latest biennial edition of *Salaries of Scientists, Engineers, and Technicians—A Summary of Salary Surveys*, published by the Scientific Manpower Commission.

- 1979 starting salaries reached \$21,500 for bachelor's level petroleum engineers and \$25,800 for new Ph.D. chemists. At the bottom, women bachelor degree graduates in the agricultural and biological sciences averaged only \$11,500 to \$11,700 per year. Although women bachelor degree level chemists and engineers were paid slightly higher starting salaries than men in 1979, men earn more both at the start and later in their careers in all other fields, at all degree levels, and at all levels of experience.

- Industry pays the highest salaries and academic institutions the lowest for almost all levels of experience and education and in all fields. However, for some groups, federal government salaries are higher than those paid by private industry. Experienced federal government economists averaged \$33,800 in 1978—the top salary average among government scientists and engineers.

- Doctoral scientists and engineers in industry averaged \$29,900 in 1977, followed closely by those in the federal government at \$29,700—still 17 percent above the overall median of \$25,600. Women doctorates earn considerably less than men in every field and in every activity, averaging 20 percent less overall. Minority doctorates have salaries that are about 7 percent below those of majority men. Teaching pays less than any other activity, and averages about \$10,000 below salaries paid for management of research and development.

- Scientists and engineers working in research and development earn salaries ranging from \$15,588 for nonsupervisory bachelor degree level agricultural and biological scientists to \$36,372 for Ph.D. mining and petroleum engineers. Women

represent only 5 percent of all scientists and engineers employed in research and development, and their salaries lag far behind men's.

- Academic salaries, already well below those in government and industry, fell even further behind in 1979 as average salaries expressed in constant real dollars dropped about 3 percent. Most scientists and engineers in industry and government, however, experienced a small increase in real dollars.

These are a few of the highlights from the new publication by the Scientific Manpower Commission, which provides detailed information on starting and advanced salaries of scientists, engineers, and technicians in industry, government, and educational institutions. This 130-page report, compiled from more than 40 sources, includes 138 tables and 7 charts detailing salary levels by type of employer, field, highest degree, years since first degree, sex, age group, category of employment, work activity, geographic area, academic rank, Civil Service grade and grade distribution, and level of responsibility.

Some salary comparisons in nontechnical fields are included.

*Salaries of Scientists, Engineers and Technicians—A Summary of Salary Surveys*, Ninth Edition, prepared by Eleanor Babco, is available from the Scientific Manpower Commission, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, for \$20 per copy. Earlier editions, available at reduced prices when ordered with the new edition, can be used for trend studies.

## Science, Engineering, and Diplomacy Fellowships Established

"One of the major policy issues in coming decades will be the broad relationship between science, technology, and foreign affairs," Edward E. David, Jr., president of Exxon Research and Engineering Company, Inc., and retiring AAAS Board Chairman, has said in testimony before the House Committee on Science and Technology.

To promote more effective use of scientific and technical knowledge in foreign affairs, AAAS, in cooperation with the State Department, announces the establishment of a Science, Engineering, and Diplomacy Fellows Program.

Two postdoctoral to mid-career sci-

## AAAS Socio-Psychological Prize

Submission of entries in the 1980 competition for the AAAS Socio-Psychological Prize is invited. Established in 1952 with funds donated by Arthur F. Bentley, the \$1000 prize is awarded annually for a meritorious paper that furthers understanding of human psychological-social-cultural behavior. The prize is intended to encourage in social inquiry the development and application of the kind of dependable methodology that has proved so fruitful in the natural sciences.

Entries should present a completed analysis of a problem, the relevant data, and interpretation of the data in terms of the postulates with which the study began. Purely empirical studies, no matter how important, and purely theoretical formulations, no matter how thoughtful, are not eligible.

The winning entry will be selected by a Committee of Judges selected by a management committee consisting of officers of the AAAS Sections on Anthropology (H), Psychology (J), and Social and Economic Sciences (K), and the Executive Officer of AAAS. The prize will be presented at the 1981 Annual Meeting in Toronto, 3-8 January.

Unpublished manuscripts and manuscripts published after 1 January 1979 are eligible. The deadline for receipt of entries is 1 July 1980. For entry blank and instructions, write to the AAAS Executive Office at the AAAS address.

entists or engineers will be appointed for 1 year, beginning 1 September 1980, to work as staff officers in the State Department's Bureau of Oceans and International Environmental and Scientific Affairs. Potential assignments may include assisting in developing and negotiating procedures with coastal nations for the conduct of marine scientific research, working on various international aspects of energy, assisting in monitoring and examining bilateral scientific and technical agreements between the United States and the People's Republic of China, or helping to carry out new State Department responsibilities for coordinating the international science and technology activities of some 29 federal agencies.

Prospective Fellows must demonstrate exceptional competence in some area of science or engineering, be flexible, and have a strong interest or some experience in applying knowledge toward the solution of problems in the area of foreign affairs. Salary is \$23,000 annually. A secret security clearance must be obtained after selection.

Deadline for receipt of applications is 15 February 1980. For application materials write: Science, Engineering, and Diplomacy Fellows Program at the AAAS address.

## International Bio-Energy Conference Scheduled for April

"Bio-Energy '80," a world conference and exposition featuring all aspects of energy from biomass, will be held in Atlanta, 21-24 April 1980.

The AAAS will cosponsor the conference, arranged by the Bio-Energy Council, along with numerous federal and international agencies and other scientific associations.

The Bio-Energy Council, a nonprofit corporation, was created after the 1976 Washington, D.C., conference on "Capturing the Sun Through Bioconversion." It provides a central source of information on the development and use of solar energy stored in plant matter.

Cochairpersons for the conference are Ann Cox Chambers, U.S. Ambassador to Belgium, and Otto Klima, vice president, General Electric Company.

Major speakers will include The Honorable George Busbee, Governor of Georgia; Philip H. Abelson, editor, *Science*, and chairman, Bio-Energy Council; Bi Jilong, undersecretary general of the United Nations; S. David Freeman,

chairman of the board, Tennessee Valley Authority; William D. Carey, executive officer, AAAS, and vice chairman, Bio-Energy Council; Mohamed Gherab, secretary general of the United Nations Conference on New and Renewable Sources of Energy; and T. Marshall Hahn, Jr., president, Georgia-Pacific Corporation.

Seminar topics will include biomass sources, conversion processes, products and uses, total systems, basic research, commercialization, and impact analysis. An exhibit of products, services, and publications will be held in conjunction with "Bio-Energy '80."

For further information, write to the Bio-Energy Council, Suite 825 A, 1625 Eye Street, NW, Washington, D.C. 20006.

## Youth Activities in San Francisco

A number of activities for young people will be featured at the 1980 AAAS annual meeting in San Francisco. They include:

- a special *Youth Symposium on the Frontiers of Science*, all day Saturday, 5 January;
- the annual program of the *American Junior Academy of Science*—student research reports (poster sessions), reception, banquet, tours—Friday through Sunday, 4-6 January;
- an evening series of *Conversations with Scientists*, Friday through Monday, including a special informal session with a group of Hispanic and Native American scientists; and
- a luncheon on opportunities in science education on Saturday, 5 January.

A youth supplement to the annual meeting program will be available for students with details of these activities plus additional highlights of the meeting—selected symposia, *Science Film Festival*, and *SCIENCE INTERNATIONAL* exhibit.

## Toronto Meeting in 1981

It is not too early to begin thinking about the annual meeting in Toronto (3-8 January 1981). If you have suggestions for a symposium for the Toronto meeting, please submit the following information *no later than 15 March 1980*:

- a. Name, address, affiliation, and phone number of person who would arrange the symposium

(if more than one arranger is proposed, specify which one is to receive correspondence).

- b. Title of proposed symposium.
- c. Brief (about 200 words) statement of the purpose of the symposium.
- d. List of probable speakers (do not confirm until the proposal is accepted), their affiliations, and probable topics.

All proposals are subject to review and if the material submitted is inadequate for the purpose of reviewing, the proposal will be returned. Notification about acceptance, conditional acceptance, or nonacceptance will be sent about the beginning of May. Preliminary programs with confirmed speakers are due in mid-June. Final program copy, suitable for publication, is due in early August.

Symposia that deal with the latest developments in science and technology and the implications of these developments for society are of particular interest. All AAAS members are encouraged to write regarding suggestions for symposia and general comments on the annual meeting.

Send proposals to the Meetings Office at the AAAS address.

## For the Library

"A Research Agenda on Science and Technology for the Handicapped," the final report of a National Science Foundation-supported study (November 1978), is now available to interested persons. The report includes recommendations for research in the areas of vocal, visual, aural, and mobility impairment and examines the social and economic aspects of disability. Single copies are available by contacting Karen Ehrlich, Office of Opportunities in Science at the AAAS address (telephone—202-467-5438 voice or TTY).

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*1979 Fellows Directory*, listing the 14,000 current Fellows of the AAAS, alphabetically by electorate (entries include name, address, and other sections of interest). The directory is available from AAAS Sales for \$6 prepaid (\$5.40 to AAAS members).

**For more information about the activities and publications described in AAAS News, write to the appropriate office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, unless otherwise indicated.**