

DOE basic research

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ensure quality control of the department's research activities, the panel recommended the formation of a Research Coordinating Committee consisting of the four Assistant Secretaries, with the OER Director as chairman.

Buchsbaum told us that such recommendations, if implemented, should not be interpreted as a diminution of the OER Director's responsibilities. Rather they are a recognition of "the fact that a department as diverse as the DOE has many programs that are technologically based and therefore need basic technical understanding to achieve their goals. It is simply unrealistic to expect the OER to cater to all needs and maintain adequate flow of information from its program to those of the more applied programs of the Assistant Secretaries."

John Deutch, the current OER Director, endorsed these recommendations. He noted that such an organizational structure would be similar to that employed by industry. In many large corporations there is a central research laboratory, as well as research (suited to specific product requirements) within each operating division.

Scope of program. The panel praised the quality of the OER's present research programs, which are generally in the physical and mathematical sciences and are carried out primarily in the DOE laboratories. But it suggested that the OER should be given an increased budget to support research in disciplines (such as biological, environmental, social and systems sciences, and policy alternatives) that do not fit well within existing programs.

The panel recommended the establishment by DOE of a National Program for Fossil-Fuels Research, with a concentration on "fundamental research that is needed before industry can go forward with economically viable large-scale commercial developments." As an example, they noted that the development of improved tools for combustion diagnostics will require new ideas and knowledge in laser development and utilization, in materials sciences and solid-state physics, in geophysical exploration and monitoring techniques and in other disciplines. The panel also cited long-term fundamental studies in catalysis.

The fusion programs supported by the DOE were criticized for their propensity "to move ahead too rapidly without adequate theoretical, experimental and engineering assessment of existing results." Aware of the formation by the OER of the Ad Hoc Experts Group on Fusion (PHYSICS TODAY, this issue, page 85), the OSTP panel suggested only that the DOE conduct a broadly based program, with sufficient basic research and university participation, and demand maximum

value from the expensive experiments performed at the DOE's large-investment facilities.

DOE's overall basic-research program "should be of a size and scope to assure the health of disciplines of importance to the long-term development of energy technologies," according to the panel. Noting that "high-quality basic research is a long-term endeavor," the Working Group advised that sharp fluctuations in support level should be avoided, so as not to "unduly impair the work of outstanding performers." This is an extremely important issue for universities, which often must make long-term commitments to research programs and graduate students.

The panel criticized the review and procurement procedures for basic-research proposals in non-OER sectors of the DOE, describing them as not well organized, overly involved, time consuming and producing considerable antagonism between the potential researcher and the DOE employees who analyze the proposals.

Universities and laboratories. Characterizing the level of university research in energy-related studies as being "especially meager," the panel recommended that the DOE increase the budget for basic research in these institutions. Such an increase, they warned, may have to come from the diversion of funding originally slated for development activities or even other parts of the basic research programs.

The erosion of the missions of several DOE national laboratories, particularly those that have put greater emphasis on non-nuclear work, also concerned the Working Group. The panel suggested that these laboratories need new definitions of their roles; otherwise "they lose identification with particular engineering goals and their effectiveness diminishes." In such an atmosphere, basic research becomes isolated and its role less clear.

Discussion of the report of the OSTP panel examining basic research in the Department of Defense will appear in PHYSICS TODAY next month. —CBW

Plans for international technology cooperation

President Carter announced in March that he was establishing the Foundation for International Technological Cooperation as a means of improving technological cooperation between the US and developing countries. Ralph Smuckler, professor of political science and dean of international studies and programs at Michigan State University, has been named director of the planning office for the new foundation, which is intended to become operational in fiscal year 1980.

Some of the functions of FITC will be to coordinate US scientific and techno-

logical efforts for application to developing countries' needs, to assist developing countries in strengthening indigenous scientific and technological institutions, in part by implementing scientific and technological education and manpower training programs, and to build collaborative relationships with developing countries.

NSB delays decision on theory institute

The National Science Board has postponed a final decision on the possible formation of a new National Science Foundation institute for theoretical physics (PHYSICS TODAY, May 1977, page 111). Designed to facilitate effective work on problems that cut across traditional physics subfield lines, the institute would have about 30 members (mostly visitors) at any one time and would cost about \$1 million per year to operate. According to Marcel Bardon, director of NSF's division of physics, the Foundation received 15 proposals, of which only one is still under consideration as an institute.

in brief

Sigma Delta Epsilon, Graduate Women in Science, is offering Eloise Gerry Fellowships of \$2000 to \$8000 each and Grants-in-Aid of \$750 each to women who hold degrees in one of the physical, mathematical or biological sciences and are currently involved in research or have an approved research proposal. Application deadlines are 1 December for the fellowships and 15 January for the grants. Further information may be obtained from the national headquarters at 1346 Connecticut Avenue, NW, Room 1102, Washington, D.C. 20036.

Nominations will be accepted through 1 November for the American Carbon Society's George Skakel Memorial Award, which recognizes over-all contributions, and Charles E. Pettinos Award, which recognizes recent outstanding accomplishments in the science and technology of carbon materials. Both awards carry a cash prize of \$1000. Forms are available from L. A. Joo', Great Lakes Research Corporation, P.O. Box 1031, Elizabethton, Tenn. 37643.

The Quanta-Ray Company, an electronics firm in Mountain View, California, has signed an agreement with Stanford University to utilize Stanford-developed laser technology in connection with its high-powered YAG (yttrium aluminum garnet) multi-megawatt laser for a wide range of chemical applications. □