Seamans interview

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(out of a total request of $312 million for physical research) was not substantially altered by Congress. Seamans told us that "The FY 1976 budget was not put together on the basis of priorities but rather on the basis of work that was already underway in the agencies we inherited." To this end the FY 1976 budget is quite obviously still an AEC budget, with nearly 60% of the total ERDA R&D money going into nuclear energy.

Seamans, showing an engineer's pragmatism and skepticism, is not at all convinced that all of ERDA's options should be in the nuclear area: "For the next five years at least," he said, "much more of our effort must be spent in good, sound engineering practices—improving design of furnaces, increasing mileage of cars, using municipal waste as an energy source—and, of course, we need to place much more emphasis on conservation and coal technology. However, we need to maintain support for long-term programs which have a payoff in the future, such as the breeder reactor and fusion. That is why we must have well thought out R&D strategies. We had not yet had the opportunity to think out those strategies for the FY 1976 budget and that's why we didn't ask for more money in certain areas as some people thought we should have. We may ask for increased funding after we've developed those strategies."

These long-term strategies are being worked out via an elaborate system that touches many bases at ERDA with input from other federal agencies, including the National Science Foundation, the National Bureau of Standards, the Federal Energy Administration and the national laboratories. Three strategies are being considered—for the near term (through 1985), the mid term (1985–2000) and the long term (after 2000)—but it appears that the earliest this planning could be reflected would be in the FY 1977 budget, which does not begin until October 1976. Even then, expansion in the molecular and material-science programs is not likely to come immediately at the expense of high-energy physics support, Seamans stressed. "In connection with our long-term planning exercise, there has been some discussion on the subject of whether some of the basic physical research now supported by ERDA would be better off in the National Science Foundation," he told us. "But AEC provided a good home for basic physics research in the past and at least for the short term I see no change in ERDA support."

Applied high-energy physics? "Personally, I think it is important that the United States continue to be preeminent in the high-energy physics area," he said. When pressed, however, Seamans admitted that he is leaving open the option that some of the support in the high-energy physics budget might be devoted to new, more applied areas. These would be new technologies that could draw on the special expertise in the high-energy physics program, he said. Areas where this potential exists include superconductivity (wire, magnet design, fabrication techniques), cryogenics (refrigerators, cooling, large systems), digital encoding of graphical data (maps, charts), large-scale instrumentation, large-scale data handling, computer control of large systems (power plants, utility networks), computer simulation and accelerator technology.

It is also possible that in the future (beyond 1980) the industrial community may be cut in for a share of the physical-research division budget. "The exact nature of industrial participation cannot be defined until we are actually there," ERDA's Daniel R. Miller told us. Miller is acting director of the physical-research division. "We foresee that as our physical-research program gets into fields related to other energy systems, there may be areas where industry has a unique capability to do the work. The figure we are using now is that industry may perhaps share five to seven percent of the ERDA physical-research budget by 1980."

Seamans is also reassessing the role of the national laboratories in the agency's long-range plans. "I'm not in a position to say now which way they should go," Seamans admitted. "Each is working in more than just the nuclear area. In fact, a lot of the laboratories have done relevant research in coal conversion technologies. The only major issue is whether some of them should discontinue weapons development, and this would affect Livermore, Sandia, and Los Alamos. We hope to have this issue resolved by Fall." At least until 1980 the national laboratories can look forward to increased budgets which should increase levels of utilization.

Congressional support. In fact, at the present time ERDA's major problem is not which programs will be cut back, but rather how to keep Congress from inundating the agency with money that it cannot handle. This year's authorization hearings for ERDA were reminiscent of the heyday of the National Institutes of Health when every congressman added funds to the budget for his favorite disease—with ERDA each congressman has a favorite energy technology. "Our problem is trying to harness this enthusiasm for our energy programs and to generate an understanding in Congress for what needs to be done and can be done," he said.

To some extent his job of pulling things together at ERDA is complicated by the delay in naming all the assistant administrators. He has been criticized by some for spending more of his time with his planning and analysis staff than with his operating staff, which he is doing because he has a comprehensive R&D plan due in Congress at the end of June. Seamans, though, refuses to be hassled by his critics' dismay with a seeming lack of urgency. "It takes a lot of time to find the right people to do the jobs and to make a comprehensible and comprehensive plan. My goal is to fashion a team of people who can work well together to meet the long-term needs of the nation in the energy areas. I plan to take that time."

—Madeleine Jacobs

in brief

A three-day Nuclear Regulatory Commission meeting to air the public's views on nuclear energy center siting will be conducted in Washington, D.C. during 16–18 June. Call (301) 427-6357 for more information.

NASA is inviting scientific proposals until 2 September for its possible Mariner Jupiter/Uranus 1979 flyby mission. Details of how to participate are available from M. A. Mitz, Code SL, NASA Headquarters, Washington, D.C. 20546.

The new *Environment Energy Contents Monthly* will include tables-of-contents from over 400 journals covering energy and environmental work. Subscriptions are available for $16.00 a year from Environmental Energy Institute, PO Box 1450, Portland, Ore. 97207.

The Texas Instruments Foundation Founders' Prize has been established to recognize outstanding achievement in the physical, health and management sciences, engineering and mathematics. Detailed information about the $35 000 prize may be obtained from S. T. Harris, Texas Instruments Foundation, PO Box 5474, Dallas, Texas 75222.

The new $3.6 million American Museum of Atomic Energy was dedicated on 5 April at Oak Ridge, Tenn. The original museum opened in 1949.

Lunar Samples are now available to colleges and universities in the US for teaching purposes. Write to Lunar Sample Curator, Code TL, Johnson Space Center, Houston, Texas 77058 for details.

A recently signed NASA and Electric Power Research Institute agreement will provide a framework for the application of aerospace technology to problems in the electric power industry. □