

development. The energy research and development strategy, as laid out by Press, is to de-emphasize nearer-term technologies and focus support to "longer term research and development, where there is less incentive for private investment." In keeping with this strategy, Press announced, the Department of Energy will "increase support for solar research and development by 24 percent and longer-term solar-related technology development and applied research by 40 percent."

In keeping with the Administration's late 1978 pro-solar scramble, nuclear research and development will decline in absolute dollars and magnetic fusion will increase by only 2 percent. Over \$800 million will be poured into the solar program, barring congressional alteration, in FY 1980.

Second to the Department of Defense in basic civilian research and development funding is the National Aeronautics and Space Administration. Over the decade of the 1960s, the nation's space program was the leading edge of basic scientific research and advanced technological innovation. Under its program for eventual deep-space exploration and near-space colonization, NASA was a critical funder of developmental work in fusion, magnetohydrodynamics (MHD), thermionics, and advanced nuclear technology.

After years of no substantive national policy, the Carter Administration, through Frank Press, has revised the mission of the U.S. space effort. No new project starts will be initiated in the next two to three years. NASA officials describe the program as in a "holding pattern" with all attention directed to the space shuttle and "earthly" applications of space technology.

A White House fact sheet on the U.S. Civil Space Policy, prepared by Frank Press and released on Oct. 11, 1978 by the President, states that space science and exploration will take place in a manner that "provides short-term flexibility to impose fiscal constraints when conditions warrant."

The fact sheet poses the goal of "increasing the return on the \$100 billion investment in space to the benefit of the American people ... it is neither *feasible nor necessary* to commit the United States to a high-challenge space engineering initiative comparable to Apollo."

In a presentation before the National Space Club on Jan. 16, 1979, Senator Adlai Stevenson, as chairman of the Senate Commerce Committee's Subcommittee on Science, Technology and Space, voiced his concern about the Administration's space policy. "We must not restrict our vision by relying excessively on the grim calculus of cost/benefit ratios and zero-based budgets," Stevenson said. "We need to recapture an earlier spirit — a willingness to run risks, try new ideas, compete, test the unknown and excel."

—Marsha Freeman

"Reverse" technology transfer

The Carter Administration's science and technology policy does not end with Science Advisor Dr. Frank Press advocating a greater emphasis on solar power, environmental concerns, and the views of the uninformed layman. Legislation will be presented to the U.S. Congress this month to establish a Foundation for International Technological Cooperation that will not only sponsor a program for industrialized nations like the United States to foist labor-intensive "appropriate technologies" on the developing sector, but will do a big public relations push for bringing Third World technologies to the United States.

The following interview with the proposed director of the foundation, Dr. Ralph Smuckler, was provided to Executive Intelligence Review by Fusion magazine.

Q: *Dr. Smuckler, what is the goal of the new institute?*

A: The goal is to close the gap between the advanced sector and the developing countries. This may require balancing of the standards of living between the U.S. and developing countries. The institute will help the developing countries choose technology more effectively rather than simply taking it from the West.

Q: *What kind of joint research and development projects will the U.S. formulate for energy development in the Third World?*

A: Not enough work has been done in the area of disaggregated energy systems. Though they have seemed less cost-effective (than large, central power station technology — ed.), their economics have not really been looked into. We will also be trying to encourage the development of local resources.

Q: *In the section of the draft report dealing with agriculture it is suggested that low-energy farming and agricultural methods which the new institute wants to help develop for the Third World would be applicable to advanced farming in the U.S. It is certainly a novel idea to transfer "appropriate technology" back from the Third World to the advanced sector. Could you comment?*

A: We were not the first ones to propose this in agriculture. A few years ago, Bill Stout from Michigan State University did a report for the United Nations making the same point. More recently, *Science* magazine has also said that the future of agriculture is in energy-saving activity. I think that in areas of urban problems and the environment, this "reverse flow" of technique and information is also possible.

Q: *What about political opposition from Third World countries, like Mexico, that have made clear they aren't interested in "appropriate technology," but want to build nuclear plants and advanced agriculture and industry?*

A: Lopez Portillo's program sounds to me a lot like that of the Shah of Iran.