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National Engineering Action Conference

The time for action to deal with the precarious state of engineering education in the United States has come. With that conviction, some 50 university presidents, chief executive officers of major corporations, heads of engineering societies, government leaders, and members of their staffs braved the snows of the great spring blizzard of 1982 to attend the National Engineering Action Conference (NEAC) in New York on 7 April.

These leaders did not come as representatives of individual institutions, but as representatives of more than 20 key national associations directly concerned with engineering education. They knew that the economic strength and security of the United States depend critically on the quality of the training received by the cohort of young engineers who will enter industry and government in the coming years. And they recognized that if present trends continue—with more than 1600 engineering faculty positions now vacant and deteriorating engineering laboratories on campus—these young men and women will not receive the education that they want, that they deserve, and that the times require.

The conference participants issued a "call to action," advocating initiatives appropriate to local circumstances and institutions. They also produced a "suggested action agenda" and "action examples" illustrating the agenda, which they are taking back to their organizations for consideration. Not a few organizations have already taken some of the actions described in these documents. A chief goal of the conference was to inspire others to join in—to preserve and increase the momentum of efforts already under way. Suggestions in the action agenda include:

For higher education: Increase incentives, rewards, and recognition for undergraduate teaching of engineers. Set engineering faculty compensation at a level that realistically reflects the market for such talent in industry.

For industry: Provide direct financial support to U.S. resident master's and doctoral candidates in the form of traineeships, scholarships, and awards. Create opportunities for junior faculty to increase their income through consulting, summer employment, tutorials, and grants.

For academic and professional societies: Expand scholarship and fellowship aid to engineering doctoral students and make direct grants to the schools. Encourage the memberships of these societies to make financial contributions in support of engineering education and, where possible, take advantage of corporate matching grant programs.

For state and federal government: Encourage reexamination of policies, especially at the state level, which may preclude making the pay of engineering faculty and the educational environment competitive. Encourage engineering doctoral study by providing additional fellowships and other aid under the aegis of the National Science Foundation, the mission agencies, and other government organizations.

While NEAC will have no organizational afterlife, the American Society for Engineering Education, through its offices in Washington, D.C., will continue its recently inaugurated program to act as a clearinghouse for information on the engineering faculty crisis. We who attended the conference have pledged our efforts to find and apply the remedies. We urge our colleagues to join with us. In the words of Massachusetts Institute of Technology president Paul Gray, who conceived NEAC and asked me to chair it, "The nation must begin now to make stronger efforts . . . to avoid future substantial declines in either the quantity or quality of engineering graduates on which so much of our future national well-being must depend."—E. E. DAVID, JR., *President, Exxon Research and Engineering Company, Florham Park, New Jersey 07932*