



*Opening the Pathways to Engineering*

# NEWS RELEASE

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## **NACME Symposium Highlights Crisis in Science, Technology, Engineering and Mathematics (STEM) Education**

### **Maintaining America's Economic Competitiveness in Engineering & Technology Will Require a Diverse Workforce**

America is facing a crisis in the fields of science, engineering and technology. The U.S. workforce in these fields is on the verge of retiring in record numbers, and we are not encouraging and preparing enough secondary school students to fill the looming gap. The result is a severe shortage of engineering college graduates, according to speakers at a symposium hosted last month by the National Action Council for Minorities in Engineering (NACME).

"If we fail to act, the looming gap in the U.S. science and technology workforce is a quiet crisis that will grow in intensity and quickly undermine the ability of our nation to continue as the preeminent leader in science and engineering," said Shirley Ann Jackson, president of Rensselaer Polytechnic Institute, and chair of the Board of the American Association for the Advancement of Science, in a keynote address to corporate, academic and government leaders at the event. "Fifty years ago the United States was jolted to action by the Soviet launch of Sputnik. The ensuing "space race," in reality a "science race," launched the careers of many of today's scientists and engineers. The urgency of national and global "energy security" is the "space race" of this millennium. What we have done before, we can do again, if we mobilize the resources in education necessary to ensure that all of our students are prepared and engaged."

The crisis is exacerbated by the inadequate number of underrepresented minority students who are prepared to study engineering and technology at the college level. Thomas Vander Ark, Director, Education, Bill and Melinda Gates Foundation, stated, "Only 32 percent of American high school students will graduate from high school with the skills they need to succeed in college or work." He added: "Only one of five students of color will leave high school ready for college."

"Minority students represent a significant resource pool for the engineering and technology workforce," according to Dr. John Brooks Slaughter, NACME's president and chief executive officer. "Of 659,000 minority high school graduates in 2003, only 26,000 had the requisite preparation in science and mathematics to qualify for admission to study engineering or technology at the college level."

NACME has programs aimed directly at addressing the two major elements of this national crisis.

**Scholarships:** For over 30 years, NACME has been the leading force in focusing the nation's efforts to increase the diversity of the engineering workforce in America. Corporations, foundations, universities and individuals have contributed more than \$150 million in cash, goods and services that have enabled NACME to support over 20,000 minority engineering students at

160 universities across the nation. Over the next three years, NACME will more than double the number of minority students receiving financial support from 750 to over 1,600 per year.

**Pre-Engineering Studies:** Recognizing that an increase in college scholarships alone will not substantially affect the number of minority students entering the engineering workforce, NACME is expanding its efforts into the nation's middle and high school systems. By partnering with organizations having proven expertise in school reform, and bringing to the table its resources and affiliations with corporations and universities, NACME will initiate programs to enrich the pre-college science, math, engineering and technology (STEM) curriculum at select urban schools. This will result in an increase in the number of students graduating from high school with sufficient course work in mathematics and science, and applying for and enrolling in a college engineering program. Additionally, NACME will mount an awareness campaign that will emphasize the important role community colleges play in preparing minority students to attain a B.S. degree in engineering. This will include providing scholarships to support students who choose two-year colleges as their initial post-secondary education experience and enhancing articulation agreements between its partner universities and community colleges.

NACME's goal is to increase the number of underrepresented minority students entering and graduating from engineering schools so that the graduating class has a demographic makeup consistent with the population at large.

More than 200 leaders from universities, corporations, government, foundations and other groups participated in NACME's Symposium, held November 14-16, 2005, in Tysons Corner, Virginia. The event was made possible with underwriting support from Amgen Inc., Northrop Grumman Corporation and other sponsors.

Visit the NACME website at [www.nacme.org](http://www.nacme.org) for additional information on the NACME Symposium.