

United States Senate

WASHINGTON, DC 20510-2101

November 17, 2006

Ralph J. Cicerone, PhD
President
National Academy of Sciences
500 5th Street, NW
Washington, DC 20001

Dear Dr. Cicerone:

We understand that the National Academy of Sciences has begun to examine the issue of diversity in the science, technology, engineering, and math workforce and its role in keeping America innovative and competitive. We are writing to urge you to conduct a formal study on this critical issue.

The National Academy's recent report, *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, identified key policy recommendations for maintaining American competitiveness in the years to come. The report ranked the improvement of education in science, technology, engineering, and math, at the top of the list, and rightly recognized the need to ensure that low income and minority students have equal access to the highest quality education in these disciplines. By exploring the challenges we currently face and the steps we can take to overcome them, the Academy can have a critical role in developing a strong and diverse workforce and in ensuring that each and every individual in America has the opportunity to contribute to the 21st century economy.

Currently, African-Americans represent only 4% of the science and engineering workforce, and Hispanics are similarly underrepresented. Americans of color are entering postsecondary studies in science, technology, engineering, and math at higher rates than white students, but significantly fewer African-American and Hispanic students are graduating with degrees in these fields. Only 63% of such students will continue their study in such fields to earn a bachelor's degree.

By 2050, the Census Bureau predicts that 50% of the U.S. population will be Hispanic, African-American, and Asian. The current science and engineering workforce, however, is nearly 82 percent white and more than 75 percent male. If this workforce is to expand as predicted, and if we are to continue to be innovative and competitive, we cannot accept this decreasing percentage of the population in fields that are so vital to the future of the American economy.

We ask that you explore challenges and barriers to diversity at every level of education and employment in the fields of science, technology, engineering, and math and make recommendations for ways the federal government can better ensure a robust, diverse workforce in the years to come. Specifically, we ask that you examine the following:

- What are the key social and institutional factors that shape the decisions of minority students to commit to education and careers in the science, technology, engineering, and math fields?
- What are the specific barriers preventing greater minority student participation in the science, technology, engineering, and math fields?
- What are the primary focus points for policy intervention to increase the recruitment and retention of underrepresented minorities in America's workforce in the future?
- What programs are underway to increase diversity in the science, technology, engineering, and math fields? Which programs have been shown to be effective? How can they be expanded and improved?
- What is the role of minority-serving institutions in the diversification of America's workforce in these fields? How can that role be supported and strengthened?
- How can the public and private sectors better assist minority students in their efforts to join America's workforce in these fields?

The National Academy's insight on these issues will provide us with needed guidance on how we can work most affectively to develop a strong and diverse workforce in these fields that is equipped for success in the global economy of the 21st Century and beyond. As you know, our diversity is one of our greatest strengths, but we cannot fully utilize that strength unless we ensure that all Americans are given the educational and career opportunities they need and deserve. We thank the National Academy for its commitment to this fundamental issue and for its consideration of our request to conduct further study in this area as soon as possible.

Sincerely,



Edward M. Kennedy



Barbara A. Mikulski



Patty Murray



Hillary Rodham Clinton

cc: Dr. Deborah Stine, PhD, Associate Director, Committee on Science, Engineering, and Public Policy