

Senator Barack Obama
Responses to Questions from
The Association for Women in Science &
The Society of Women Engineers
October 2008

(1) In a September 2006 report, *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*, the National Academies stated that, in order to maintain scientific and engineering leadership amid increasing economic and educational globalization, the United States must aggressively pursue the innovative capacity of all people, regardless of sex. Although women make up almost half of the U.S. workforce, they continue to be underrepresented in STEM professions, particularly in the higher academic faculty ranks and leadership positions. How can we address the need for more women in STEM?

Joe Biden and I agree with the conclusion of the National Academies' *Bias and Barriers* report that the United States must aggressively pursue the innovative capacity of all people. In a globalized world, our prosperity and national security depend on our ability to lead the world in innovation. Other nations are now challenging that leadership, and in responding we must call upon talent and creativity of all of our people. We will need to significantly increase our STEM workforce, and to do that we will need to engage not just women and minorities but also persons with disabilities, English language learners, and students from low income families.

Women are significantly underrepresented in the STEM workforce, and especially in the leadership positions in research and academia. We need women in leadership roles both for their contribution and for the message of encouragement and opportunity that their presence sends to our daughters. We support a range of proactive measures that will open opportunities in science to women, such as requiring minority and female representation on government panels developing innovation and competitiveness strategies, and establishing mentoring programs to support women and underrepresented groups in STEM education programs - two measures that I helped pass as part of the America COMPETES Act. We also support improved educational opportunities for all students, increased responsibilities and accountability for those receiving federal research funding, equitable enforcement of existing laws such as Title IX, continuation and strengthening of programs aimed at broader engagement in the STEM disciplines, full funding for the America COMPETES Act, and increased funding for the National Institutes of Health.

(2) What is your position on H.R. 6314, the "Fulfilling the Potential of Women in Academic Science and Engineering," recently introduced by Representative Eddie

Bernice Johnson (DTX)?

Representative Eddie Bernice Johnson has long been an advocate for underrepresented groups in the STEM fields. H.R. 6314 aims to strengthen policies and increase the accountability of the federal science agencies around issues of recruitment and retention of women in science and engineering. Joe Biden and I endorse these efforts.

(3) For the past thirty-six years, Title IX has been applicable to all educational programs that have received federal funds and not just collegiate athletics. Despite this law, however, there have been indications that it has not been evenly enforced by all federal funding agencies nor adhered to by all educational institutions, as the law initially intended. How could we ensure that Title IX is evenly applied to all sectors of academia, including STEM departments, rather than just athletics?

Title IX has had an enormous impact on women's opportunities and participation in sports as we have recently seen in the tremendous success of our athletes at the Beijing Olympics. Title IX, though, does not even mention sports. It applies to all educational programs that receive federal funding. If pursued with the necessary attention and enforcement, Title IX has the potential to make similar, striking advances in the opportunities that girls have in the STEM disciplines. For 35 years, Title IX has been a bulwark against sex discrimination against students and employees at all levels of education. Joe Biden and I will fight to make sure women have equal opportunities and access from pre-kindergarten through graduate school.

(4) This fall, voters in Nebraska and Colorado will consider anti-affirmative action initiatives that could affect existing programs which, many feel, have helped establish more opportunities for women and minorities while improving the gender, racial, and ethnic diversity in educational institutions and in workplaces. What is your position on these anti-affirmative action initiatives?

We believe in a country in which opportunity is available to all Americans, regardless of their race, gender, or economic status. That's why we oppose these ballot initiatives, which would roll back opportunity for millions of Americans and cripple efforts to break down historic barriers to the progress of qualified women and minorities. We recognize the need to maximize the talent pool that the United States brings to the Science and Engineering enterprise. It would be unfortunate if anti-affirmative action initiatives distracted us from the pressing need to develop and exploit the talent of all of our citizens, including women, minorities, persons with disabilities, English language learners, and students from low income families. Yet even as we continue to defend affirmative action as a useful, if limited, tool to expand opportunity to underrepresented populations, we should consider spending a lot more of our political capital convincing America to make the investments needed to ensure that all children perform at grade level and graduate from high school—a goal that, if met, would do more than affirmative action to help those students who need it the most. And while Joe Biden and I support affirmative action, we also support efforts to increase opportunities for qualified men and women from low-income backgrounds to attend colleges and

universities – regardless of their race or gender.

(5) The National Science Foundation (NSF) currently has several programs intended to broaden participation in the STEM fields, i.e. the ADVANCE program. How can we maintain and/or strengthen existing NSF programs targeted to increasing diversity in STEM education?

The ADVANCE program, which aims at institutional transformation, has been hugely successful in creating academic environments that work for everyone. The NSF should continue to fund ADVANCE as well as its other STEM programs that aim to broaden engagement, and it should share the lessons learned with a broader community. In addition to specific programs aimed at broadening engagement, the NSF has added a broader impact merit review criteria for all proposals. This criteria aims to capture the larger benefits of a research project to society. It can be met in a variety of ways, including activities aimed at increasing the numbers and successes of students from underrepresented groups. It has made funded scientists and engineers more aware of their responsibility to engage all students in education and research. Other federal agencies should be encouraged to adopt similar review standards for research.

(6) Women on average bear more of the family caregiving responsibilities than men. States such as California, Washington, and New Jersey have implemented paid family leave policies that provide partially paid leave for employees who need to care for seriously ill family members, newborns, and adoptive or foster children. What do you believe is the responsibility of the federal government with regard to paid family leave?

According to the National Partnership for Women and Families, 78 percent of employees covered by the FMLA who have needed leave but have not taken it report that it is because they could not afford to take unpaid leave. Of those employees who could not afford leave, nearly 88 percent report that they would have taken leave if they had been able to receive some pay while away from work. Furthermore, access to paid leave is correlated with income and education, with low-income families least likely to have the resources or savings to compensate for time off. As president, I will initiate a 50 state strategy to encourage all of the states to adopt paid-leave systems. I will provide a \$1.5 billion fund to assist states with start-up costs and to help states offset the costs for employees and employers. And my Department of Labor will also provide technical information to the states on how to craft paid-leave programs consistent with their local needs.

(7) Last summer, the America COMPETES Act (P.L. 110-69), a bipartisan authorization bill to bolster U.S. competitiveness through sustained investments in science and engineering research and STEM education, was signed into law. To date, appropriations for the America COMPETES programs have not been consistent with the levels authorized by this bill. How can we ensure that this law is followed and that these funding levels are realized?

I cosponsored the America COMPETES Act and added several amendments that

help to improve the diversity of our STEM workforce. One amendment required that minorities and females be represented and consulted during the development of innovation/competitiveness strategies at the National Science and Technology Summit (NSTS), on the President's Council on Innovation and Competitiveness, and elsewhere, and another established a mentoring program to support women and underrepresented groups as they progress through education programs proposed by the Department of Energy.

I have been greatly disappointed that the Bush administration has failed to invest the necessary money in the America COMPETES programs. Intransigence on the budget made it impossible to find the money needed to support its goals. It will plainly be impossible to meet these goals if my opponent in this election follows through on his promise to freeze domestic discretionary spending. Joe Biden and I, however, are strongly committed to doubling basic research budgets over ten years at federal agencies that include the NSF, the Office of Science in the Department of Energy, and the National Institute of Science and Technology. And we are committed to predictably increasing the budget of the National Institutes of Health at a similar rate, and are pleased that there is bipartisan consensus to roll back this administration's lack of investment in important life sciences research.