

STATEMENT OF JOHN CASTELLANI

PRESIDENT OF BUSINESS ROUNDTABLE

BEFORE THE

COMMITTEE ON SCIENCE AND TECHNOLOGY

OF THE

UNITED STATES HOUSE OF REPRESENTATIVES

ON

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Mr. Chairman, Ranking Member Hall, Members of the Committee, good morning. My name is John Castellani, and I serve as President of the Business Roundtable, an association of chief executive officers of leading U.S. companies with more than \$5 trillion in annual revenues and more than 12 million employees. Business Roundtable member companies are technology innovation leaders, with more than \$111 billion in annual research and development spending – nearly half of all total private R&D spending in the U.S.

I welcome the opportunity to appear before you today to address the vitally important task of reauthorizing the America COMPETES Act, which Business Roundtable views as a fundamental prerequisite to restoring stable, long-term U.S. economic growth and job creation.

America's CEOs are committed to accelerating American innovation and boosting the worldwide competitiveness of the United States. They understand that investments in scientific research and math and science education help create the platform for sustained, long-term growth.

The formula is simple. Investments in research and education provide the tools for accelerated technological innovation, which drives productivity growth. Innovation leads to new products and processes—even whole new industries—thereby generating high-wage employment and a higher standard of living for all Americans.

Business Roundtable's commitment to fostering U.S. innovation and competitiveness is not new. In 2005, the Roundtable, together with other national business associations, including those on this panel, created the Tapping America's Potential campaign, or TAP, with the goal of significantly increasing the number of American science, technology, engineering and mathematics graduates with bachelor's degrees. We believe that expanding the talent pool is a critical element—perhaps *the* critical element—of the innovation agenda that America must pursue in order to remain competitive in the 21st century. The America COMPETES Act is an important tool in achieving that goal.

When Congress passed the America COMPETES Act in 2007, the United States faced major competition from powerful new economic rivals, some of which were minor competitors only a decade ago. Today, those rivals have emerged from the worldwide economic downturn in an even stronger position. While the United States struggles with persistent high unemployment and crippling budget deficits at every level of government, China continues to pour billions into

research and education in a determined effort to move up the value chain and produce more high-value-added products and services. At a time when America's ability to finance critical investments in national innovation capacity is constrained, our global competitors are redoubling their efforts to challenge U.S. innovation leadership.

Mr. Chairman, as you know, after you and your colleagues on the Committee led Congress to pass the America COMPETES Act, it took nearly two years and the worst economic crisis since the Great Depression before the provisions of the Act were adequately funded. It is perhaps ironic that as Congress prepares to reauthorize the Act, its original enactment is just now beginning to be implemented and the programs have not yet been rigorously evaluated. Yet we can say with confidence that reauthorization of the America COMPETES Act is absolutely vital to ensuring future U.S. innovation leadership and prosperity and security for America's workers.

Reauthorization of the Act will provide support for the foundations of America's innovation system at a time when some question America's commitment to continued worldwide technological and economic leadership. Reauthorizing the Act and building on its key provisions will help restore confidence in America's future, attract more young Americans into technical fields, and expand the employment horizons and earnings potential of millions of new American workers.

The America COMPETES Act authorized significant increases in physical science and engineering research sponsored by key civilian science agencies, research that directly enhances America's ability to innovate and create new jobs. These research investments will also help America address its energy and sustainability challenges. In June of last year, Business Roundtable released a major economic study, *The Balancing Act: Climate Change, Energy Security and the U.S. Economy*, which outlined six key technology investment pathways that can lead to efficient greenhouse gas reductions without harming long-term economic growth. Extending the authorized increases for physical sciences and engineering research will provide the knowledge creation necessary to accelerate development of the advanced energy technologies recommended in Business Roundtable's report.

Mr. Chairman, you and your colleagues on this Committee have led Congress in adopting a far-sighted approach to energy technology development that focuses on a balanced, portfolio of research investments that will yield dramatic gains in energy efficiency, renewable energy technology, carbon capture and storage for coal-fired power plants, advanced nuclear energy technology, and smart grid and transmission technologies that will enable greater use of electric vehicles and renewable power. The fact is that we will need every one these new technologies to address climate change and power our economy. Technology is not a silver bullet, but it does offer a critical advantage in smoothing the transition to more sustainable economic growth, greater energy security and a cleaner environment. This is a clear case of science in service of national need. Reauthorizing the America COMPETES Act is an essential component of our national effort to address America's energy and sustainability challenges.

The America COMPETES Act authorized new and expanded scholarship and training programs to recruit new K-12 math and science teachers and enhance the skills of existing teachers. Business Roundtable has identified the lack of qualified math and science teachers in America's public schools as a major impediment to improved U.S. educational achievement in math and science. In 2008, Business Roundtable and our partners released the TAP progress report, *Gaining Momentum, Losing Ground*, which documented how U.S. student achievement in math and science continues to fall short compared with students from our global economic competitors - despite commitments from the White House and Congress to improve U.S. math and science education. When it comes to innovation, the state of America's public education system is our nation's greatest weakness. Extending the math and science education provisions of the America COMPETES Act and evaluating their effectiveness helps give America's children the preparation they need to succeed in the 21st century workplace.

Mr. Chairman, this is a critical issue for America and for this Committee. The persistent poor performance of U.S. students in math and science threatens our security and long-term prosperity. Over the last twenty years, occupations that require technical proficiency have grown nearly three times faster than the overall rate of employment growth. Workers in technical fields earn more and enjoy greater job security than most other workers. Technical professionals have weathered the economic downturn better than other workers, and there is some evidence that the technology-intensive industries that employ these workers are leading America's economic recovery. Nearly every job in America requires more math and science proficiency than those same jobs required twenty years ago. Nearly every job created in the United States over the next ten years will require more math and science fluency than the average job today. Will America produce the skilled workers to fill these positions?

Last month, Business Roundtable released the final recommendations from The Springboard Project – an independent commission it convened – to ensure that American workers thrive after the economy rebounds. Based on surveys of workers and employers, the commission found that the gap between worker skills and the needs of employers is widening, exactly the opposite of what we would hope to see if every American is to find gainful, fulfilling employment. It will come as no surprise to you, Mr. Chairman, that the commission found that improving education and training in the United States is essential to building a more highly skilled workforce. The need is pressing. Seventy-three percent of the U.S. Bureau of Labor Statistics' projected fastest growing occupations require some level of postsecondary credentials, yet the United States ranks second-to-last among developed countries in post-secondary completion rates.

As you and your colleagues examine the America COMPETES Act, the math and science education provisions of the Act have the potential to offer the most promise for beneficial results for the American people. Strengthening K-12 math and science teacher recruitment and training, expanding proven math and science education programs, and supporting math and science education in the nation's community colleges provide the foundation to advance overall U.S. competitiveness and the individual economic success of Americans. It also is critical for you to coordinate closely with the Education and Labor Committee during the reauthorization

of the Elementary and Secondary Education Act in order to ensure a coherent strategy to improve science, technology, engineering and math education.

One of our greatest challenges going forward, Mr. Chairman, is one that you are intimately familiar with and that is securing stable funding commitments from Congress for the programs authorized by the America COMPETES Act. Our nation's science and technology enterprise is a miraculous font of knowledge and wealth creation. The technology that has flowed out of this enterprise over the last century has transformed our lives, created an ever-rising standard of living for all Americans, and unleashed an astonishing wave of productivity and economic growth. The economic data are clear. Investments in research and education are among the most productive investments available to federal policy makers. It is our job to help persuade Congress that nurturing America's innovation ecosystem, even in the face of severe fiscal constraints, is the right policy choice for the near term and the long term. Our future depends on it.

Business Roundtable is proud to have been an early and robust supporter of the original America COMPETES Act, and we strongly support its reauthorization. It embodies a sound, positive agenda for growth that will help lift America out of the economic doldrums and open up new opportunities for U.S. workers.

Mr. Chairman, it is up to us to ensure that America remains the world's technological and economic leader for the remainder of this century. With your help, and the help of all of the Members of the Committee on Science and Technology, Business Roundtable believes that America will recover from its current economic circumstances and continue to lead the world in providing prosperity and opportunity for its citizens.

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Thank you again Mr. Chairman, Ranking Member Hall, and Members of the Committee. Under your leadership, Mr. Chairman, this Committee is a model for developing bipartisan solutions that address critical issues. I appreciate this opportunity to express Business Roundtable's views on this important legislation. I welcome your questions.