



1st Row: Neugebauer, Bartlett, A.Smith, Gingrey, Diaz-Balart, Giffords, McNerney, Mitchell, Rothman, Matheson 2nd Row: Lucas, Rohrabacher, Biggert, Ehlers, Sensenbrenner, Hall, Gordon, Costello, Johnson, Wu, Baird, Lampson, Wilson Standing: Miller, Woolsey, Richardson, Chandler, Carmahan, Melancon, Lipinski

# Committee on Science and Technology 110<sup>th</sup> Congress (2008)

BART GORDON, TN, Chairman

Democrats JERRY F. COSTELLO, IL EDDIE BERNICE JOHNSON, TX LYNN C. WOOLSEY, CA MARK UDALL, CO DAVID WU, OR BRIAN BAIRD, WA BRAD MILLER, NC DANIEL LIPINSKI, IL NICK LAMPSON, TX GABRIELLE GIFFORDS, AZ JERRY MCNERNEY, CA LAURA RICHARDSON, CA DONNA F. EDWARDS, MD STEVEN R. ROTHMAN, NJ JIM MATHESON, UT MIKE ROSS, AR BEN CHANDLER, KY RUSS CARNAHAN, MO CHARLIE MELANCON, LA BARON P. HILL, IN HARRY E. MITCHELL, AZ CHARLES A. WILSON. OH ANDRÉ CARSON, IN

Republicans RALPH M. HALL, TX F. J. SENSENBRENNER, JR., WI LAMAR SMITH, TX DANA ROHRABACHER, CA ROSCOE G. BARTLETT, MD VERNON J. EHLERS, MI FRANK D. LUCAS, OK JUDY BIGGERT, IL W. TODD AKIN, MO TOM FEENEY, FL RANDY NEUGEBAUER, TX BOB INGLIS, SC DAVID REICHERT, WA MICHAEL T. MCCAUL, TX MARIO DIAZ-BALART, FL PHIL GINGREY, GA BRIAN P. BILBRAY, CA ADRIAN SMITH, NE PAUL BROUN, GA

## Foreword

#### Congressman Bart Gordon (D-TN) Chairman, U.S. House Committee on Science and Technology



My goal as chairman has been for this to be the Committee of good ideas and consensus. I'm proud that we pass the overwhelming majority of our bills with unanimous, bipartisan support.

In the 50 years since the Committee on Science and Technology was created, the U.S. has made tremendous breakthroughs. We've watched a

man walk on the moon. We've peered into the future revealed by our own DNA. We send ideas, currency, and images in seconds, instead of hours or days, since the advent of the Internet.

The next 50 years will see a country and a world even hungrier for scientific progress. One of the most compelling issues we will face is ensuring our own country's competitiveness in the global marketplace. Today, half of the world's workers make less than \$2 a day. We cannot and should not compete with that. Instead, we have to compete at a higher level with better skills and higher productivity. We have to nurture the scientists who will be making discoveries and the students who will fill technical jobs in all sectors of the economy.

With this in mind, in 2005 the Committee asked the National Academies to look down the road and determine what we needed to stay competitive. The ensuing report, "Rising Above the Gathering Storm," painted a picture of a stagnating U.S. economy, an educational system that did not prepare its students for the jobs needed, and the U.S. losing its place as a world

leader in scientific progress and made recommendations on how to address these issues.

At the beginning of the 110<sup>th</sup> Congress, we put these recommendations into legislation that became the America COMPETES Act. Signed into law in August 2007, COMPETES invests in basic research, strengthens science, technology, engineering and math (STEM) education programs, and addresses our need for innovation in the energy sector by creating an Advanced Research Projects Agency for Energy (ARPA-E) modeled after the successful DARPA program that brought us stealth technology, GPS, and the Internet.

In addition, the Committee played a central role in enacting the Energy Independence and Security Act, which was signed into law in December 2007. The Committee moved eight bills plus several other amendments that were packaged into this law – addressing energy technology needs on biofuels, solar, geothermal, ocean and hydrokinetic, carbon capture and sequestration (CCS), energy storage, industrial energy efficiency, and hydrogen, as well as smart grid technologies and energy efficiency for appliance, buildings, and vehicles.

I hope that this is just the beginning of what this Committee will do over the next 50 years. From scientists in the lab and students in the classroom to researchers in the field and consumers in the marketplace, I expect the Science and Technology Committee will continue to rise to meet a bright and sustainable future.

Bart John

Bart Gordon Chairman

## Foreword

#### Congressman Ralph Hall (R-TX) Ranking Member, U.S. House Committee on Science and Technology



In the 28 years since I was first elected to the U.S. House of Representatives, I have been pleased to be an active member of the Science and Technology Committee, including service as ranking member, both as a Republican and as a Democrat, and as chairman of the Space Subcommittee. The Committee's rich history reflects how

bipartisanship, coupled with science-based policymaking, can advance innovation and research that benefit all Americans.

Recognizing that innovation is the key to U.S. economic success, the Committee has recently focused its efforts on strengthening the U.S. research enterprise and American hightech industry. By aggressively promoting STEM education at all levels, this Committee has made a determined commitment to make America more competitive for generations to come.

In my capacity throughout the years, I am proud to have maintained strong support for a robust manned spaceflight program at NASA. I believe that manned spaceflight has contributed more to securing America's technological and economic leadership in the world than any other civilian government program. Through both great success and occasional tragedy, NASA has captured the hearts and imaginations of the American people and spawned decades of technological innovation, the benefits of which have far exceeded the cost of investment. If we want to remain economically competitive for future generations, it is imperative that we continue to support manned spaceflight.

Another focus that is sure to remain at the top of the Committee's agenda is the need for cheap, clean, reliable and abundant energy. The U.S. relies too heavily on unstable regimes to provide the energy that runs our economy. The Science and Technology Committee has been at the forefront of efforts to diversify our energy portfolio by promoting renewable and alternative energy sources. This Committee is strategically positioned to help find real solutions to our energy problems, along with finding ways to use our abundant domestic fossil fuel resources more cleanly and efficiently.

I am proud to have served on the Science and Technology Committee for over half of its remarkable history. Our Committee has made great strides in supporting America's scientific enterprise and will continue to play a key role in meeting our nation's challenges in the years to come.

Ralph M. Hall

Ralph Hall Ranking Member



Astronaut Buzz Aldrin, lunar module pilot of the first lunar landing mission, and the U.S. flag on the Moon. (Photo courtesy of NASA)