

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

111th Congress – Agenda Overview

The 111th Congress begins with our nation facing challenges on many fronts: a foundering economy; a climate in crisis; a growing need for energy we produce at home; and our scientific leadership slipping. The keys to solving these problems lie in science, technology, and the American spirit of innovation. In the 111th Congress, the Committee on Science and Technology plans to work on issues including energy technology development, climate and weather monitoring, math and science education programs, nanotechnology, the space program, aviation research, and technical standards for industries from energy to health care to telecommunications. The Committee also will work with the new Administration to implement other critical science and technology priorities.

Innovation: Maintaining Our Competitiveness

Innovation in new technologies has accounted for 50% of our country's growth in GDP over the last 50 years, and science and technology will be key to reversing the economic downturn and staying ahead of many other nations that continue to gather economic strength. The Committee plans to:

- Work with the new Administration and Congress to fully fund the America COMPETES Act
- Reauthorize the National Nanotechnology Initiative and ensure that the U.S. is a leader in the development of nanotechnology
- Restructure national information technology R&D to address current needs
- Examine the growing challenges presented by Internet congestion and the future of communications technologies over multiple mediums
- Address the need for standards, evaluation techniques, and improved methods for characterization in the area of biologic pharmaceuticals
- Continue work on the development of technical standards for interoperability and security of health information technology (health IT) systems
- Work to develop updated policies for encouraging Federally-supported research at labs and universities to be brought into the marketplace

Energy: Developing Clean Technologies

Our dependence on foreign sources of energy, increasing greenhouse gas emissions, the need for a more balanced energy portfolio, and rising energy costs will be solved by science, technology, and innovation. The Committee plans to:

- Work with the new Administration to implement the Advanced Research Projects Agency for Energy (ARPA-E) – based on the successful DARPA model, ARPA-E is tasked with undertaking high-risk, high-reward energy technology development, especially research that is too cross-cutting or multi-disciplinary to fit into the current system, and partnering with the best talent in the private sector, universities, and the national labs
- Conduct oversight on the implementation of energy technology programs authorized in EISA 2007 (solar, geothermal, hydrokinetic, cellulosic biofuels, carbon capture and sequestration, energy storage, smart grid, and energy efficiency programs) and recommend any necessary changes
- Review programs at the DOE Office of Science, including ways to strengthen the linkages between basic energy research, applied energy research, and technology transfer and ways to make DOE lab management more effective
- Address new energy technology challenges, including nuclear reactors and reprocessing, vehicles including heavy trucks, and pipelines for new fuels and CO₂

Workforce: Creating Jobs of the Future

When half of the world's workers earn less than \$2 a day, our country needs to compete at a higher level – with better skills and higher productivity. The Committee will continue seeking to ensure not only that our nation will produce the world's leading scientists and engineers but also that all students will have a strong grounding in math and science and are prepared for technical jobs in every sector of the economy. The Committee plans to:

- Evaluate STEM education programs across the Federal government and determine how to better coordinate these efforts to make them more effective
- Assess efforts to promote diversity in the STEM workforce and gender equity at academic institutions
- Directing investments across the economy in technologies and entities – including small manufacturers and high-tech firms - to create “green jobs” that boost economic growth

Environment: Protecting Our Natural Resources

New technologies are critical to addressing growing global environmental problems including climate change, water shortages, and waste management in economically viable ways. The Committee plans to:

- Address the need for accurate and reliable technologies to monitor reporting and compliance with greenhouse gas emission limits in any climate change cap-and-trade scheme
- Direct more effective coordination of Federal research on water supply, quality, and conservation and set a roadmap for technologies, such as “produced water” technologies, needed to address water issues arising from the interdependency of water and energy resources
- Direct R&D programs to address the environmental and economic implications of electronic waste (e-waste) from computers, televisions, cell phones, and other consumer goods
- Conduct a wholesale review of weather and ocean research at the National Oceanic and Atmospheric Administration, including work on ocean acidification and harmful algal blooms

Space: Exploring and Inspiring

Our country’s space policy must continue to include engagement in the most cutting edge research and inspiration for the next generation of scientists and engineers. To do this, NASA will need the resources to fulfill each of its diverse missions - human space exploration, science and R&D, aeronautics, and education. The Committee plans to:

- Work with the new Administration on a multi-year authorization for NASA that balances its missions and ensures that programs such as Earth observations and climate research, aeronautics R&D to address environmental issues, and support for K-12 classrooms and college students, as well as human spaceflight and research at the International Space Station, all flourish
- Review the capabilities of emerging space-faring nations and explore an expansion of international space collaboration
- Address the challenges facing the commercial space industry and determine ways to encourage emerging entrepreneurial space ventures (“New Space”)

Transportation: Building New Types of Infrastructure

Traditionally, improving infrastructure has been primarily about building more – more roads, more runways, more structures. The Science and Technology Committee will look at ways to use technology to make existing and new infrastructure more efficient. The Committee plans to:

- Focus surface transportation R&D on intelligent transportation systems, more advanced materials such as pavements, and other technologies to increase energy efficiency and reduce congestion
- Ensure adequate progress on the NextGen air traffic control program, which will rely on satellite technology rather than radar to make air traffic safer, more efficient, and less congested

Security: Protecting People from Natural and Man-Made Threats

Emerging technologies – as well as better uses of existing technologies – can improve the safety and security of our communities and our nation. The Committee plans to:

- Review and refocus Federal disaster mitigation research programs related to fire, wind and earthquakes
- Ensure that the Department of Homeland Security aligns its research priorities with the most critical threats and homeland security needs and ensures that the technology developed meets reliable testing and evaluation standards as well as the needs of end-users.
- Focus research on technologies such as unmanned aerial vehicles and tunnel detection to improve border security

Investigations and Oversight: Uncovering Mismanagement and Restoring Scientific Integrity

In the last Congress, the Investigations and Oversight Subcommittee produced 485 letters requesting Administration documents, recommending policy changes, and requesting GAO investigations and 5 staff reports detailing significant abuses, including how the CDC failed to protect public health when FEMA distributed toxic trailers to hurricane victims and how the Veterans Administration allowed vital scientific disease samples to be destroyed. In the 111th Congress, the Subcommittee will continue to pursue investigations of mismanagement and threats to public safety, including negligence in the NPOESS satellite program and the lack of attention to environmental justice issues at the EPA. In addition, the Subcommittee will work with the new Administration to end the politicization of science at Federal agencies and restore scientific integrity to policy decision-making processes.