

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON TECHNOLOGY AND INNOVATION**

HEARING CHARTER

*The Role of Small Business in Innovation and Job Creation:
The SBIR and STTR Programs*

**Thursday, March 31, 2011
2:00 p.m. – 4:00 p.m.
2318 Rayburn House Office Building**

1. Purpose

On Thursday, March 31, the Subcommittee on Technology and Innovation of the Committee on Science, Space, and Technology will hold a hearing to examine the role of the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) Programs in promoting innovation. Witnesses will discuss their experience with the SBIR and STTR Programs and will provide advice on areas of potential improvement as the Committee considers reauthorization of these programs.

2. Witnesses

Dr. Sally Rockey is the Deputy Director for Extramural Research at the National Institutes of Health.

Dr. Donald Siegel is Dean and Professor at the School of Business, University at Albany, State University of New York, and a Member of the research team for the Committee for Capitalizing on Science, Technology, and Innovation, National Research Council of the National Academies.

Mr. Mark Crowell is the Executive Director and Associate Vice President for Innovation Partnerships and Commercialization at the University of Virginia.

Mr. Doug Limbaugh is the Chief Executive Officer of Kutta Technologies.

Ms. Laura McKinney is the President and Chief Executive Officer of Galois, Inc.

3. Brief Overview

The hearing will examine the effectiveness of the SBIR and STTR Programs in promoting small business innovation and job creation. Witnesses will describe whether the programs are achieving their defined objectives, whether the current structure and

size of the programs are appropriate, and whether eligibility requirements should be adjusted.

4. Issues for Examination

The Committee will examine several aspects of the SBIR and STTR programs including: whether the SBIR and STTR Programs are effectively promoting innovation and job creation; whether firms that are majority-owned by venture capital operating companies should be eligible to apply for program funding; whether the current extramural research set aside of 2.5 percent for SBIR programs is adequate; whether the current guidelines on award sizes is appropriate and to what extent agencies should have flexibility in determining award sizes; whether there is significant geographic concentration among award recipients and, if so, what accounts for this concentration; whether there is evidence to suggest that a significant number of companies receive multiple SBIR awards with unusually low commercialization rates; and whether the management and coordination of the program across the federal government needs to be improved.

5. GAO and NRC Reviews of the SBIR and STTR Programs

The GAO has conducted multiple studies of the SBIR and STTR programs since their inception assessing: rates of commercialization; effectiveness of SBIR and STTR activity in meeting agency R&D needs; small business participation in government R&D; geographical concentration of award funding; and ability of agencies to effectively evaluate the SBIR and STTR programs.

In June 2005, the GAO submitted congressional testimony, which found that the SBIR program has helped “enhance the role of small businesses in federal R&D.”¹ However, an October 2006 GAO study found that “agencies need to strengthen [their] efforts to improve the completeness, consistency, and accuracy of awards data” to better assess the effectiveness of the program in achieving its defined objectives.²

As part of the 2000 reauthorization of the SBIR program, Congress directed the National Research Council (NRC) of the National Academies to conduct a comprehensive evaluation the SBIR program. The NRC report, published in 2008, found the SBIR program to be “sound in concept and effective in practice” while also recognizing areas of potential improvement. The NRC found that the “SBIR program is making significant progress in achieving the congressional goals for the program,” though it also noted that more regular evaluations are needed, since “insufficient data collection, analytic capability and reporting requirements, together with the decentralized character of the

¹ U.S. General Accountability Office, *Observations on the Small Business Innovation Research Program*, GAO-05-861T, Washington, DC: U.S. General Accountability Office, 2005.

² U.S. General Accountability Office, *Small Business Innovation Research: Agencies Need to Strengthen Efforts to Improve the Completeness, Consistency, and Accuracy of Awards Data*, GAO-07-38, Washington, DC: U.S. General Accountability Office, 2006.

program mean there is limited ability to make connections between program outcomes and program management and practices.”³

As part of its assessment, the NRC conducted surveys of SBIR and STTR award recipients. The Phase II Survey found that “34 percent of NIH projects surveyed generated at least one patent, and just over half of NIH respondents published at least one peer-reviewed article.”⁴

According to the NRC Firm Survey, over 20 percent of companies indicated that they were founded entirely or partly because of an SBIR award. On average, companies that responded to the survey reported adding 29.9 full-time equivalent employees since receipt of their SBIR award. Comprehensive data on commercialization rates is inconsistent across federal agencies, but respondents to the survey “indicate that just under half of the projects do reach the marketplace.”⁵

6. Background

SBIR

Congress passed the Small Business Innovation Development Act (P.L. 97-219) in 1982 to increase participation of small high-technology businesses in federally funded research and development activity. The Act established the SBIR program within the major federal research and development (R&D) agencies. Research has suggested that small businesses are both highly innovative and engines of significant job creation.⁶

The original objectives of the SBIR program include:

- Stimulation of technological innovation in the small business sector;
- Increased use of the small business sector to meet the government’s R&D needs;
- Additional involvement of minority and disadvantaged individuals in the process;
- Expanded commercialization of the results of federally funded R&D.

The 1992 SBIR reauthorization placed greater emphasis on the objective of commercialization of SBIR projects.

Current law requires that every federal department with an extramural R&D budget of \$100 million or more establish and operate an SBIR program. Eleven federal departments have SBIR programs, including the Departments of Agriculture, Commerce,

³ National Research Council of the National Academies, *An Assessment of the SBIR Program*, Washington, DC, The National Academies Press, 2008.

⁴ Ibid.

⁵ Ibid.

⁶ J. O. Flender and R. S. Morse, *The Role of New Technical Enterprise in the U.S. Economy*, Cambridge, MA: MIT Development Foundation, 1975, and David L. Birch, “Who Creates Jobs?” *The Public Interest*, 65:3-14, 1981.

Defense, Education, Energy, Health and Human Services, Homeland Security, and Transportation; the Environmental Protection Agency, the National Aeronautics and Space Administration; and the National Science Foundation. Under the program, each qualifying federal department is mandated to set aside 2.5 percent (doubled from 1.25 percent in the 1992 reauthorization) of its applicable extramural R&D budget to support mission-related work conducted by small companies.

Agency SBIR efforts are broken down into three phases. In the first phase, awards up to \$150,000 for six months (increased from \$100,000 as of March 30, 2010 under a Small Business Administration (SBA) Policy Directive⁷) are provided to evaluate a concept's scientific or technical merit and feasibility. The project must be of interest to and coincide with the mission of the supporting organization. Projects that demonstrate potential after the initial endeavor may compete for Phase II awards of up to \$1,000,000 lasting one to two years (increased from \$750,000 under a March 30, 2010 SBA Policy Directive⁸) to perform the principal R&D. Phase III funding, directed at the commercialization of the product or process, is expected to be generated in the private sector. Federal dollars may be used if the government perceives that the final technology or technique will meet public needs, though this funding must come from outside the SBIR Program.

The SBA created broad policy and guidelines under which individual departments operate SBIR programs. The agency monitors and reports to Congress on the conduct of the separate departmental activities.

Criteria for eligibility in the SBIR program include companies that are independently owned and operated; not dominant in the field of research proposed; for profit; the employer of 500 or fewer people; the primary employer of the principal investigator; and at least 51 percent owned by one or more U.S. citizens or lawfully admitted permanent resident aliens. Subsidiaries of SBIR-eligible companies are also eligible to participate as long as the parent company meets all SBIR requirements.

The SBIR program has been reauthorized several times since its creation and was scheduled to terminate on September 30, 2008. While the program has not been specifically reauthorized since then, it has been extended by several bills, most recently by P.L. 112-1, which extends the program through May 31, 2011.

STTR

The Small Business Technology Transfer Program (STTR), created by P.L. 102-564 and reauthorized several times through fiscal year 2009, is a small business program that provides federal R&D funding for research proposals that are developed and executed cooperatively between a small firm and a scientist in a nonprofit research organization, and fall under the mission requirements of the federal funding agency.

⁷ Federal Register, Vol. 75, No. 60, Tuesday, March 30, 2010, 15756

⁸ Federal Register, Vol. 75, No. 60, Tuesday, March 30, 2010, 15756

Up to \$100,000 in Phase I financing is available for one year; Phase II awards of up to \$750,000 may be made for two years. Federal departments with annual extramural research budgets over \$1 billion must set aside of 0.3 percent for STTR programs. Currently, the Departments of Energy, Defense, and Health and Human Services, NASA, and NSF participate in the STTR program.

STTR-eligible small business partners must be American-owned and independently operated, be for-profit, and must have no more than 500 employees. Nonprofit research institution partners must be located in the U.S., and must meet one of three definitions: a nonprofit college or university; a domestic nonprofit research organization; or a federally funded R&D center (FFRDC).

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7. 110th and 111th Congressional Hearings

The House Committee on Science, Space, and Technology held two hearings in the 110th Congress and one hearing in the 111th Congress to examine SBIR and STTR programs and to analyze the success of the programs in meeting their defined objectives.

8. SBIR/STTR Discussion Draft Reauthorization

For purposes of discussion, draft legislation to reauthorize the SBIR and STTR programs has been supplied to witnesses and Members of the Subcommittee prior to the hearing. Among other things, the draft would reauthorize both programs for three years; increase Phase I and Phase II award sizes for both programs; allow for greater participation of venture-capital backed firms in the SBIR program; and enhance data collection for the programs.