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CRS Report for Congress

The Small Business Innovation Research Program: Reauthorization Efforts

Wendy H. Schacht
Specialist in Science and Technology Policy
Resources, Science, and Industry Division

Summary

The Small Business Innovation Development Act of 1982, P.L. 97-219, created Small Business Innovation Research (SBIR) programs within the major federal research and development (R&D) agencies. This effort was intended to increase participation of small innovative companies in federally funded R&D. Government agencies with extramural R&D budgets of $100 million or more are required to set aside a portion of these funds to support research and development in small businesses through the SBIR program. The original act has been extended several times and is currently scheduled to terminate on September 30, 2008. A bill to reauthorize and amend the program, H.R. 5819, passed the House on April 23, 2008. In the Senate, S. 3362, which also reauthorizes and amends the SBIR activity, was reported from the Committee on Small Business and Entrepreneurship on August 22, 2008.

Description of the Current Program

Congress has demonstrated an ongoing interest in the small business sector. Addressing issues related to economic growth and competitiveness, special consideration has been given to small, high tech firms for several reasons including some data that indicate such companies tend to be highly innovative, play a significant role in technological advancement, and contribute to the high standard of living in the United States. Such was the rationale behind legislation creating the Small Business Innovation Research (SBIR) program, an effort to increase that portion of the federal research and development (R&D) budget provided to small enterprises for work associated with the mission responsibilities of government departments and agencies. Believing that small companies were underrepresented in government R&D activities, P.L. 97-219, as amended, established agency SBIR programs to guarantee this sector a portion of the government's research and development budget to compensate for what was viewed as a federal contracting preference for large corporations.

Current law requires that every federal department with an extramural R&D budget of $100 million or more establish and operate a SBIR program.[1] A set percentage of that agency's extramural research and development budget[2] — originally at 1.25%, now at 2.5% — is to be used to support mission-related work in small companies. To be eligible to compete in the program, a company must be 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% owned by one or more U.S. citizens or lawfully admitted permanent resident aliens. A rule change, effective January 3, 2005, permits subsidiaries of SBIR-eligible companies to participate as long as the parent company meets all SBIR requirements.

Agency SBIR efforts involve a three-phase activity. In the first phase, awards up to $100,000 (for six months) 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 $750,000 (lasting one-two years) 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, but not SBIR funds, may be used if the government perceives that the final technology or technique will meet public needs. P.L. 102-564 directed agencies to weigh commercial potential as an additional factor in evaluating SBIR proposals.

As of FY2006, 11 departments have SBIR programs including the Departments of Agriculture, Commerce, Defense (DOD), Education, Energy, Health and Human Services, Homeland Security, and Transportation; the Environmental Protection Agency; the National Aeronautics and Space Administration (NASA); and the National Science Foundation (NSF). Each agency's SBIR activity reflects that organization's management style. Individual departments select R&D interests, administer program operations, and control financial support. Funding may be disbursed in the form of contracts, grants, or cooperative agreements. Separate agency solicitations are issued at established times.

The Small Business Administration (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.

A pilot effort to encourage commercialization of university and federal laboratory R&D by small companies was created by P.L. 102-564 and reauthorized several times through FY2009. The Small Business Technology Transfer program (STTR) provides funding for research proposals that are developed and executed cooperatively between a small firm and a scientist in a research organization and fall under the mission requirements of the federal funding agency. 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. Currently funded by a set-aside of 0.3% of the extramural R&D budget of departments

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[1] For a more detailed discussion of the current SBIR program see CRS Report 96-402, *Small Business Innovation Research Program*, by Wendy H. Schacht.

[2] It should be noted that P.L. 97-219 excluded appropriated funds for defense programs in the Department of Energy from that agency's extramural R&D calculations.

that spend over $1 billion per year on this effort, the Departments of Energy, Defense, and Health and Human Services, NASA, and NSF participate in the STTR program.

Reauthorization Legislation

H.R. 5819, The SBIR/STTR Reauthorization Act, as passed by the House, reauthorizes and makes several significant changes to the SBIR and STTR programs. S. 3362, The SBIR/STTR Reauthorization Act of 2008, as reported from the Senate Committee on Small Business and Entrepreneurship, also addresses these two programs. The following table provides a summary of the major provisions of the two bills by issue. It is designed to highlight the differences and similarities between H.R. 5819 and S. 3362.

Comparison of H.R. 5819 and S. 3362 by Major Issue

Issue	H.R. 5819	S. 3362
Reauthorization	The termination date for the SBIR program is extended to September 30, 2010, while the STTR activity is extended to September 30, 2010.	The bill extends the SBIR program to September 30, 2022, while the STTR program is extended to September 30, 2023.
Award Levels	The level of awards made under the SBIR and STTR programs is increased from $100,000 to $300,000 for Phase I awards and from $750,000 to $2,200,000 for Phase II awards.	Phase I SBIR and STTR awards are increased from $100,000 to $150,000 and Phase II SBIR and STTR awards are increased from $750,000 to $1,000,000.
SBIR Set-Aside Amounts	No similar provision.	The set-aside is increased from 2.5% in 2009 by 0.1% per year up to 3.5% in 2019 with the following exceptions: the National Institutes of Health (NIH) remains at 2.5% and the increases in funding generated by the set-aside at the Department of Defense and the Department of Energy are not to be used for Phase I or II awards but for "activities that further the technology readiness levels of technologies being developed under Phase II awards...."
STTR Set-Aside Amounts	No similar provision.	The set-aside is increased from 0.3% to 0.4% for 2010 through 2011; to 0.5% for 2012 through 2013; and to 0.6% from 2014 on.
Sequential Awards	A recipient of a Phase I grant from one federal agency would be permitted to apply for a Phase II award from another agency to pursue the original work. Companies would be allowed to switch between the SBIR and STTR programs. A small firm may apply for a Phase II award without first obtaining and successfully completing a Phase I grant as currently required. Sequential Phase II awards for a project are permitted.	A recipient of a Phase I grant from one federal agency would be permitted to apply for a Phase II award from another agency to pursue the original work. A small business would be allowed to switch between the SBIR and STTR programs.

Issue	H.R. 5819	S. 3362
Majority Venture Capital Owned Small Businesses	For the SBIR and STTR programs, the bill would allow majority venture capital ownership in a small business if not more than 50% of the firm is owned by one venture capital company and the employees of the venture capital company are not a majority of the small firm's board of directors. If the venture capital company is controlled by a business with more than 500 employees, the small business is eligible only if not more than two large venture capital companies have ownership interest in the small firm, these large venture capital companies do not collectively own more than 20% of the small business, and the large venture capital companies "do not collaborate with each other to exercise more control over the small business concern than they could otherwise exercise individually."	The bill permits NIH to award not more than 18% of SBIR funds to majority venture capital-owned small businesses so long as "...no single venture capital company owns more than 49 percent of the small business concern" upon a written determination provided to the Administrator of the SBA and the Senate Committee on Small Business and Entrepreneurship and the House Committee on Small Business. Allows other participating agencies to award not more than 8% of SBIR funds to majority venture capital-owned small businesses so long as "...no single venture capital company owns more than 49 percent of the small business concern" upon a written determination provided to the Administrator of the SBA and the Senate Committee on Small Business and Entrepreneurship and the House Committee on Small Business.
Outreach	The bill authorizes and makes changes to the Federal and State Technology Partnership (FAST) program which provides grants to organizations to provide outreach designed to encourage increased participation in the SBIR program.	Similar provisions.
Commercializa-tion Activities	To facilitate the commercialization of the results of the SBIR program, the bill requires agencies to establish procedures to encourage SBIR awardees to develop partnerships with other organizations, including prime contractors, business incubators, venture capital companies, and large business to assist them in moving to Phase III. "Express authority" is provided to agencies for development of "fast track" programs to end time delays between completion of Phase I and the award of Phase II grants. Agencies are required to implement a commercialization program to assist SBIR awardees in Phase III. A Minority Institution Pilot program is created to increase the number of SBIR and STTR applications from minority-owned small businesses.	The bill provides for commercialization pilot programs for Phase II SBIR and STTR technologies in DOD and the civilian agencies. Encourages SBIR and STTR awards to small businesses that work with federal laboratories or are involved in cooperative research and development agreements (CRADAs).
Areas of Concentration	Agencies are directed to focus on research in energy, rare diseases, transportation, and nanotechnology.	Agencies are encouraged to make SBIR and STTR awards in nanotechnology and R&D related to cures for disease.
Oversight	Agencies that administer SBIR grants of $50,000,000 or more must establish a SBIR Advisory Board comprised of agency employees, private sector representatives, veteran small business owners, and others to make recommendations on programmatic topics. An annual report is to be required.	The bill provides for the creation and maintenance of data bases collecting relevant information on the SBIR and STTR programs for use by both the government and the public sector.

Issues for Consideration

Perhaps the most contentious issue in the reauthorization is that of the level of small business ownership by venture capital companies and eligibility under the SBIR and STTR programs. The original legislation establishing the SBIR program required that small firms must be at least 51% owned by an individual or individuals. Venture capital investment was permitted, and encouraged, but limited to 49% ownership interest. The intent of providing federal grant money, as explained in the House Science and Technology Committee report (H.Rept. 97-349, Part IV) to accompany the House bill that became the basis for the legislation, was

> to provide seed capital to small, high technology firms at the early, high risk stage of initial concept development. Funds provided ... would compensate for what has been described as a lack of investment capital for small businesses.... Funds provided under the SBIR program would be used ... to cover early development costs for small firms, providing early risk capital which is necessary for the procurement of follow-up support from the private sector.

However, the issue of venture capital ownership has come to the attention of Congress as the nature of venture capital investment and R&D performance has changed since the legislation was initially enacted in 1982. Recently, questions were raised as to whether small companies with majority ownership by venture capital companies met the eligibility requirements of the SBIR program. According to an April 2006 report by the Government Accountability Office (GAO-06-565),

> in 2001, an SBA administrative law judge issued a decision clarifying that the terms "individuals" and "citizens" in the SBIR criteria meant only natural persons, not entities such as corporations.... Then in 2003, the same SBA administrative law judge issued a decision stating that venture capital firms could not be considered individuals for the purpose of satisfying the ownership criteria for the program.

Both H.R. 5819 and S. 3362 alter the eligibility requirements regarding majority venture capital ownership of small firms in the SBIR and STTR program. Proponents of this change maintain that, particularly in the biotechnology sector, the most innovative companies are not able to use these programs because they do not meet this ownership criteria. They argue that because of the high cost of biotechnology R&D, large venture capital investments are often a necessity for many of these firms. By excluding such companies from the SBIR and STTR programs, advocates maintain that the pool of applicants for participation in the effort, specifically at the National Institutes of Health, is decreasing with detrimental effects to the health and strength of the U.S. economy.

Opponents of altering the eligibility requirements argue that the program is designed to provide financial assistance where venture capital is not available. These experts assert that the program's objective is to bring new concepts to the point where private sector investment is feasible. However, they claim that the changes in the bill associated with venture capital majority ownership take federal support away from actual small businesses and place government funds into the hands of investors while favoring the biotechnology and venture capital sectors.

Under the House-passed bill, the set-aside for the SBIR and STTR programs remains at its current level. However, the Senate bill increases the amount of the set-aside for the

SBIR program by 0.1% each year until it reaches 3.5% in 2019 (with the exception of the set-aside for the National Institutes of Health which remains at 2.5% and limits on use of DOD and DOE funding increases to "activities that further the technology readiness levels of technologies being developed under Phase II awards...." The set-aside for the STTR program also is increased: from 0.3% to 0.4% for 2010 through 2011; to 0.5% for 2012 through 2013; and to 0.6% from 2014 on.

Both bills increase the amount of individual SBIR and STTR Phase I and Phase II awards that may be made. Raising the upward limit of the permitted awards appears to reflect a recognition that the performance of research and development has become increasingly expensive over the 25 years since passage of the original legislation. However, this may result in fewer awards available to small firms through these two programs, particularly under H.R. 5819 which does not increase the amount of the set-aside.

In addition to permitting larger individual awards, the bills provide more congressional direction to the participating agencies as to topics for inclusion in program solicitations and to the characteristics to be considered during the selection process. H.R. 5819 includes preferences for R&D in energy, rare diseases, transportation, and nanotechnology. Companies in rural areas and those located in areas that have lost a major industry are to be given special consideration, as are small firms owned by veterans, those that are expected to make a contribution to energy efficiency, and those that have their primary business operations in the United States. S. 3362 encourages awards in R&D associated with cures for rare diseases and nanotechnology.

The existing phased approach of the SBIR program is altered by the provisions of the reauthorization bills and may provide more flexibility for applicants and grantees. Award recipients may switch between the SBIR and STTR programs and among programs at different agencies. Under H.R. 5819, the sequential nature of the current program, where only companies that successfully completed Phase I could apply for Phase II, would no longer be the case as applicants would be able to apply for Phase II awards without going through the initial Phase I process. In addition, both bills would increase outreach to small firms and include other efforts to encourage and expand participation in the SBIR and STTR programs.

As Congress considers the possible reauthorization of the SBIR and STTR programs, and any possible changes in program operation, these and other issues may be explored.