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SBIR/STTR REAUTHORIZATION ACT OF 2008

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Mr. KERRY, from the Committee on Small Business and Entrepreneurship, submitted the following

R E P O R T

[To accompany S. 3362]

The Committee on Small Business and Entrepreneurship, to which was referred the bill (S. 3362) to reauthorize the SBIR and STTR programs, and for other purposes, having considered the same, reports favorably thereon and recommends that the bill do pass.

I. PURPOSE AND NEED FOR LEGISLATION

The purpose of the "SBIR/STTR Reauthorization Act of 2008" is to reauthorize, make current, and improve the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. The SBIR program needs to be reauthorized because it was set to sunset on September 30, 2008. The program has been extended through March 20, 2009, as part of a temporary reauthorization bill for all of the Small Business Administration's programs (S. 3026, P.L. 110–235, signed into law May 23, 2008), but needs to be fully reauthorized. The Committee believes that these programs are needed in order to stimulate America's innovation economy, to remedy the continued underrepresentation of small businesses in federal research and development, and to use small businesses to help government agencies meet national needs. Small businesses continue to receive only about 4 percent of federal research and development dollars despite the fact that small businesses employ about one-third of America's scientists and engineers, produce more patents than large businesses and univer-

sities, and are powerful vehicles for the dissemination of scientific and technical knowledge.[1] SBIR and STTR are two of the very few federal programs that utilize this largest sector of the scientific and technological community.

It is important to reauthorize these two worthy and highly successful programs for economic and national security reasons. Globalization, in particular, has resulted in increased competition and a new series of challenges to the economic and military preeminence America has enjoyed since World War II. In a comprehensive evaluation of the state of American innovation, the National Academy of Sciences' report, Rising Above the Gathering Storm, underscored the dangers the United States faces in science and technology:

> The scientific and technological building blocks critical to our economic leadership are eroding at a time when many other nations are gathering strength . . . We are worried about the future prosperity of the United States. Although many people assume that the United States will always be a world leader in science and technology, this may not continue to be the case inasmuch as great minds and ideas exist throughout the world. We fear the abruptness with which a lead in science and technology can be lost—and the difficulty of recovering a lead once lost, if indeed it can be regained at all.[2]

Government-industry partnerships in innovation and research have become increasingly critical to keeping our nation competitive internationally and to fulfilling the needs of the American people.[3] Together, SBIR and STTR form one of the largest such public-private partnerships in the nation, and they are essential to fulfilling the priority research needs of the country. Furthermore, these programs utilize the innovative capabilities of small businesses to create jobs, to stimulate local economies, and to commercialize ideas originally developed in our federal science agencies and universities. The SBIR and STTR programs also serve as powerful mechanisms to involve a diverse group of individuals, geographically and demographically, in federal research and development, thereby increasing competition, diversifying the government's supply base, and reducing costs. For these reasons, the programs need and deserve to be reauthorized, strengthened, and improved.

II. SUMMARY

The "SBIR/STTR Reauthorization Act of 2008" (S. 3362) reauthorizes the Small Business Administration's (SBA) SBIR and STTR programs for 14 years each, through 2022 and 2023, respectively. The legislation gradually increases, over ten years, the allocation for the SBIR program at most participating agencies from

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[1] National Science and Engineering Indicators 2003, National Science Foundation, Division of Science Resources Statistics. See also, Testimony of NSBA member Robert Schmidt before the House Subcommittee on Technology and Innovation, Committee on Science and Technology, "Reauthorization of the Small Business Innovation Research Programs and 'Unleashing American Innovation,'" 110th Congress, April 26, 2007.

[2] Committee on Prospering in the Global Economy of the 21st Century, Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future, Kate Kelly ed. (National Academies Press, 2007), p. 3.

[3] National Research Council, SBIR Challenges and Opportunities, Charles Wessner ed. (National Academies Press, 1999), p. 7.

2.5 percent to 3.5 percent of the agency's extramural research and development budget, and, for the STTR program, it gradually increases, over six years, the allocation at all participating agencies from 0.3 percent to 0.6 percent of this same budget. It increases the award size guidelines for the SBIR and STTR programs from $100,000 to $150,000 for Phase I and from $750,000 to $1 million for Phase II. Also, in order to protect against abuses in issuing "jumbo" awards, the bill restricts agencies from making awards that are more than 50 percent larger than the guidelines. To increase geographic participation in the SBIR and STTR programs, particularly in rural states, S. 3362 enhances and reauthorizes through 2014 the Federal and State Technology Partnership (FAST) program and the Rural Outreach Program (ROP). To help move SBIR and STTR technologies across the "valley of death" (a phrase used to describe the funding gap between Phases II and III or commercialization), the legislation extends and improves the Commercialization Pilot Program at the Department of Defense (DoD) and creates commercialization pilot programs at the other SBIR agencies, authorizing all such pilots through 2014. This bill includes a compromise on the issue of the participation of companies majority owned and controlled by multiple venture capital companies in the SBIR program, allowing the National Institutes of Health (NIH) to apply to award up to 18 percent of its SBIR dollars to companies majority owned and controlled by multiple venture capital companies and the other SBIR qualifying agencies to apply to award up to 8 percent of their SBIR dollars to this class of firms.[4] The affiliation rule itself and the 500 employee standard remain unchanged in this bill. Last, the legislation seeks to improve oversight by giving more autonomy and resources to the Small Business Administration's Office of Technology, by building in regular assessments by the National Academy of Sciences, and by streamlining data collection and reporting requirements to help Congress better assess the programs' effectiveness, to guide future policy changes, and to address record-keeping problems identified by GAO and NAS in their reports on the program.

III. History of the Program

A. SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM

1982 Establishment of SBIR: "Small Business Innovation Development Act of 1982" (P.L. 97–219, S. 881, July 22, 1982)

The federal SBIR program was created more than 25 years ago out of growing concern since the 1960s that, despite the increasing prominence of small businesses in innovation, federal research and development expenditures had disproportionately been awarded to large businesses. As a result, in 1976, Roland Tibbetts at the National Science Foundation (NSF) took the lead in directing a greater and more significant share of its extramural research and development funds to small business in a new innovation and research

[4] Participating agencies: at the time of Committee passage of S. 3362, ten federal agencies (in addition to the Department of Health and Human Services) qualified to have SBIR programs. The agencies are as follows: Department of Defense, NASA, Department of Energy, National Science Foundation, Department of Homeland Security, Department of Agriculture, Department of Education, Department of Commerce, Environmental Protection Agency, and Department of Transportation.

program, with a focus on discovering, funding, and evaluating the initial, highest-risk, most cutting-edge exploratory research that is necessary to achieve significant technological innovations and breakthroughs. The purpose was to make small but sufficient awards to test as many ideas as possible. The program at NSF led policymakers to consider taking further steps to unleash the innovative potential of small businesses.[5] On August 9 and 10, 1978, the House and Senate Committees on Small Business held a joint hearing on the underutilization of small businesses in American innovation. There was a clear consensus that small businesses deserved a greater share of federal research and development funds, not only because of the innovative and development successes of small firms, but also because of their achievements in job creation and cost efficiency and their powerful contribution to the greater science and technology communities. The 1980 White House Conference on Small Business echoed these sentiments and recommended legislation to expand the NSF concept to other agencies.[6] The end result of the recommendation was the Small Business Innovation Development Act of 1982, which first authorized the SBIR program (P.L. 97–219, S. 881, July 22, 1982). The Act creating SBIR had four objectives:

1. To stimulate technological innovation;
2. To use small business to meet federal research and development needs;
3. To foster and encourage participation by minority and disadvantaged persons in technological innovation; and
4. To increase private sector commercialization of innovation derived from federal research and development.

The intent of the 1982 Act and the original NSF program was not for the SBIR program to be merely a commercialization program. Small businesses in SBIR were designed to be vehicles for fulfilling the priority research needs of federal agencies and the nation at large while stimulating local economies. Further, as mentioned earlier, the program was designed to fund as many ideas as possible, rather than to take only a few ideas from concept to market or insertion into a government product or technology. The allocation of funds for SBIR in its first year of existence totaled $45 million, or 0.2 percent of the extramural research and development budgets of federal agencies that had extramural research and development budgets that exceeded $100 million. Per P.L. 97–219, the allocation was gradually increased over six years, until the final mandated allocation for SBIR of 1.25 percent was reached. Modeled after the NSF program, the program was structured in three phases. Phase I awards were modest and capped at $50,000 and were meant to test the feasibility of an idea or product. Phase II awards, capped at $500,000, were meant to be used to begin product development and prototyping. In Phase III, the graduation stage of SBIR, small businesses were to obtain outside funding, whether private funding or non-SBIR federal funding, to continue development toward a commercial product or products or systems

[5] Joint Hearings before the U.S. Senate Select Committee on Small Business and the U.S. House of Representatives Subcommittee on Antitrust, Consumer and Employment and Subcommittee on Energy, Environment, Safety and Research of the Committee on Small Business, "Underutilization of Small Business in the Nation's Efforts to Encourage Industrial Innovation," 99th Cong. (1978) (Transcript of the two-day proceedings).

[6] National Research Council, SBIR Challenges and Opportunities, 1999.

to further the mission of an agency.[7] P.L. 97–219 authorized the SBIR program for six years, through 1988.

1986 SBIR Extension: "A bill to provide the Small Business Administration continuing authority to administer a program for small innovative firms" (P.L. 99–443, H.R. 4260, Oct. 6, 1986)

SBIR was not set to expire until 1988, six years after its establishment, but, due to the program's political support, in 1986, it was extended for another seven years, through 1993.

1992 SBIR Reauthorization: "Small Business Research and Development Enhancement Act of 1992" (P.L. 102–564, S. 2941, Oct. 28, 1992)

The next congressional review of the program came with the "Small Business Research and Development Enhancement Act of 1992," which reauthorized SBIR for eight years, through FY 2000, and made several modifications to the program. Lawmakers praised SBIR for its accomplishments in commercialization and towards its other goals in innovation and research over its first ten years of operation. The SBIR allocation was doubled to 2.5 percent, and award sizes were increased for Phase I to $100,000 and for Phase II to $750,000. Among the arguments put forth to justify the increase to the SBIR allocation were that the SBIR program had been "an effective catalyst for the development of technological innovations" and that small firms in SBIR "[had] provided high quality research and development in a cost-effective manner."

2000 SBIR Reauthorization—P.L. 106–554. "Small Business Reauthorization Act of 2000" (P.L. 106–554, H.R. 5667, Dec. 21, 2000)

In 2000, the SBIR program was again reauthorized and extended for eight years, through September 30, 2008. The House bill incorporated changes to SBIR originally outlined in the Senate bill, S. 3236. The final legislation emphasized the need for systematic evaluation of the program and mandated a comprehensive evaluation by the National Academy of Sciences (NAS) of SBIR at federal agencies with an SBIR budget greater than $50 million. The law also established the FAST, created to increase the participation of small firms across the country in the SBIR program.

2008 SBIR Temporary Extension—P.L. 110–235. "An Act to provide for an additional temporary extension of programs under the Small Business Act and the Small Business Investment Act of 1958" (P.L. 110–235, S. 3029, May 23, 2008)

The SBIR program was extended through March 20, 2009, by S. 3029, "An Act to provide for an additional temporary extension of programs under the Small Business Act and the Small Business Investment Act of 1958," signed into law as P.L. 110–235 on May 23, 2008. This legislation amended P.L. 109–136, which temporarily authorized through February 2, 2007, any program, authority, or provision, including any pilot program, authorized under the Small Business Act or the Small Business Investment Act of 1958 that

[7] National Research Council, SBIR Challenges and Opportunities, Charles Wessner ed. (National Academies Press, 1999), pp. 18–21.

was scheduled to expire on or after September 30, 2006, but before February 2, 2007, by substituting March 20, 2009, for the 2007 date. Since the SBIR program was set to expire on September 30, 2008, the program was temporarily extended under this Act and is currently set to sunset on March 20, 2009.

This temporary extension of the sunset date was important because the previous sunset date of September 30, 2008, was fast approaching and the likelihood of passing legislation through both houses of Congress, reconciling the differences, and enacting it into law before September 30, 2008, was low. The extension, which covered all of the SBA's programs, gives Congress additional time to complete the comprehensive SBIR reauthorization process, while preventing the agencies from slowing down or shutting down their SBIR programs, as happened around the time of the 2000 reauthorization, hurting many small businesses and delaying research.

B. SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PROGRAM

Establishment of STTR: "Small Business Research and Development Enhancement Act of 1992" (P.L. 102–564, S. 2941, Oct. 28, 1992)

This legislation not only reauthorized the SBIR program, as discussed above, but also created, as a pilot, the Small Business Technology Transfer program. The goal of this program, which complements the SBIR program, was to stimulate partnerships between small businesses and non-profit research institutions, such as universities and federally funded research laboratories. STTR likewise has three phases, corresponding to the three phases in SBIR, and the two programs operate in a similar fashion and have similar goals. STTR was also designed to convert the billions of dollars invested in research and development at our nation's universities, federal laboratories, and non-profit research institutions into new commercial technologies. P.L. 102–564 required federal agencies with an extramural research and development budget of $1 billion or more to dedicate 0.05 percent of this budget to the STTR program in 1994, 0.1 percent in 1995, and 0.15 percent in 1996—the three years for which it was authorized.

1996 STTR Extension: "Omnibus Consolidated Appropriations Act, 1997" (P.L. 104–208, H.R. 3610, Sept. 30, 1996)

This legislation extended the STTR pilot program for one year and maintained the 1996 allocation level of 0.15 percent of the extramural research and development budget of participating agencies. This made the new sunset date September 30, 1997.

1997 STTR Reauthorization: "Small Business Reauthorization Act of 1997" (P.L. 105–135, S. 1139, Dec. 2, 1997)

In the 105th Congress, the STTR program was extended through 2001 by S. 1139. This bill also established the Rural Outreach Program, designed to increase the participation of small business concerns in areas with low participation rates in the SBIR and STTR programs.

2001 STTR Reauthorization: "The Small Business Technology Transfer Program Reauthorization Act of 2001" (P.L. 107–50, H.R. 1860, Oct. 15, 2001)

This bill reauthorized the STTR program for 8 years and doubled the STTR allocation from 0.15 percent to 0.3 percent of the external research and development budget of federal agencies with an external research and development budget of $1 billion or more. The STTR program is currently set to sunset on September 30, 2009.

IV. History of Legislation and Votes in Committee

The "SBIR/STTR Reauthorization Act of 2008" (S. 3362) was introduced by Senator John F. Kerry, for himself and Senator Snowe, on July 29, 2008. As introduced, the bill reauthorizes the Small Business Innovation Research and Small Business Technology Transfer programs for 14 years each, through September 30, 2022, and September 30, 2023, respectively. The bill was passed by the Committee by a roll call vote of 19–0 on July 30, 2008.

S. 3362 incorporated many of the SBIR and STTR provisions adopted by the Committee in the 109th Congress as part of S. 3778, the "Small Business Reauthorization and Improvements Act of 2006," which Senator Snowe, then chair of the Committee, introduced as an original bill on August 2, 2006. The text of that legislation was reported out of the Committee unanimously, by a vote of 18–0, on July 27, 2006. According to Senate procedure, original bills reported from a Committee may only be introduced by one Senator; however, members of the Committee wishing to cosponsor the bill included Senators Kerry, Vitter, Lieberman, Landrieu, and Cantwell. S. 3778 was never considered by the full Senate before the adjournment of the 109th Congress. While the framework for this legislation to reauthorize the SBIR and STTR programs and much of its text was derived from S. 3778, several changes were incorporated to address concerns that contributed to preventing the bill from receiving consideration in the full Senate in the 109th Congress.

S. 3362 also incorporated provisions from S. Amdt. 3023, submitted by Senators Kerry and cosponsored by Senator Snowe on September 24, 2007, to extend and improve the SBIR Commercialization Pilot Program (CPP) at the Department of Defense. The amendment was proposed for Senator Kerry by Senator Levin and agreed to in the Senate on September 25th. It amended H.R. 1585, the National Defense Authorization Act for Fiscal Year 2008. S. Amdt. 3023 was not included in the final version of this legislation that became P.L. 110–181 on January 28, 2008, because the House Committees on Small Business and Science opposed it in conference. The CPP at the Department of Defense was established in the 108th Congress by P.L. 109–163 (S. 1042/ H.R. 1815), via S. Amdt. 2531, an amendment offered by Senator Snowe and cosponsored by Senator Kerry on November 15, 2005. That amendment incorporated S. Amdts. 1504, 1536, 1537, and 1594, previous amendments offered by Senators Snowe and Kerry to S. 1042. The Commercialization Pilot Program has a sunset date of September 30, 2009, and S. 3362 would extend it through 2014.

S. 3362 also incorporated provisions from S. 2988, Senator Lieberman's "Accelerating Cures Act of 2008," S. 3274, Senator Kerry's "National Nanotechnology Initiative Amendments Act of 2008," and S. 3343, Senator Landrieu's "Rural Small Business Enhancement Act of 2008," all introduced in the 110th Congress.

The SBIR and STTR programs and the provisions in S. 3362 were deliberated in a series of hearings and roundtables in the 109th and 110th Congress.

On July 12, 2006, the Committee held a hearing entitled "Strengthening Participation of Small Businesses in Federal Contracting & Innovation Research Programs." The purpose was to discuss the state of the SBIR program and the challenges and opportunities inherent in it in anticipation of legislation to reauthorize the program (S. 3778). Witnesses included members of the Small Business Technology Counsel, members of the Biotechnology Industry Organization, owners of businesses in the biotechnology sector that had received significant amounts of venture capital and those that had not, persons familiar with SBIR initiatives on the state level, and the lead on the comprehensive National Academy of Sciences study of the SBIR program. The Committee heard testimony both for and against allowing companies majority owned and controlled by multiple venture capital firms to participate in the program and covered issues ranging from the appropriateness of award sizes to how best to increase the diversity of the program, both geographically and demographically.

On August 1, 2007, the Committee held a roundtable, "Reauthorization of the Small Business Innovation Research Program: National Academies' Findings and Recommendations," to follow-up on the 2006 hearing and to bring the discussion on reauthorization up-to-date by inviting the National Academies to present the results of its overall assessment of the SBIR program. In addition to NAS, a variety of stakeholders participated in the roundtable, including SBIR program managers at federal agencies, staff of the Office of Technology at the SBA, small business owners, trade association representatives, and providers of technical assistance to SBIR award recipients. The discussion was wide-ranging and gave participants the opportunity to provide feedback on the findings and recommendations of the NAS report, providing the Committee with further insight into a number of issues relevant to reauthorization.

On October 18, 2007, the Committee held another roundtable, "Reauthorization of the Small Business Innovation Research Program: How to Address the Valley of Death, the Role of Venture Capital, and Data Rights," in order to expand upon previous discussions of these three critical issues. Participants again included program managers at federal agencies and staff of the SBA Office of Technology, as well as small business owners in a variety of industries. The roundtable focused on initiatives in effect at SBIR agencies to help small businesses move their innovative technologies across the "valley of death" from the laboratory to the marketplace, the debate over the involvement of companies majority owned and controlled by multiple venture capital firms in the SBIR program, and the problems inherent in how SBIR data rights are treated by federal agencies and prime contractors.

The National Academy of Sciences and the Government Accountability Office issued several reports on the program since the 2000

reauthorization of SBIR that have guided the work of the Committee in drafting S. 3362.

NAS Studies: In order to better measure the progress of the SBIR program toward its objectives, when the SBIR program was reauthorized for eight years in 2000 (P.L. 106–554), Congress requested a comprehensive external evaluation by the National Academy of Sciences (NAS) of SBIR at federal agencies with an SBIR budget greater than $50 million. The goals of the studies were to determine how SBIR has stimulated innovation and used small firms to meet the research needs of the nation and to provide overall recommendations for the program. The result of the five-year, $5 million review by the NAS was a series of reports, issued beginning in 2007.

The National Academies' comprehensive assessment of SBIR, "An Assessment of the Small Business Innovation Research Program," was published in July 2007. The core finding of the NAS study was that the SBIR program is "sound in concept and effective in practice." The report also included the following short summary of the SBIR program:

> "The program is proving effective in meeting Congressional objectives. It is increasing innovation, encouraging participation by small companies in federal research and development, providing support for small firms owned by minorities and women, and resolving research questions for mission agencies. Should Congress wish to provide additional funds for the program in support of these objectives, with the programmatic changes recommended, those funds could be employed effectively by the nation's SBIR program."[8]

The NAS report also found that the SBIR program is effectively linking universities to public and private markets, increasing private sector commercialization of innovations, creating new companies, and providing widely distributed support for innovation activity. The report included a number of recommendations designed to strengthen and improve the program, including: a readjustment of the award sizes to $150,000 for Phase I and $1 million for Phase II, preservation of the basic three-phase structure of the program, regular external and internal evaluation, an increased emphasis on pilot programs, and more vigorous efforts to reach out to diverse sectors of the population, geographically and demographically, in order to improve rates of participation in the program across the country.

Agency or topic-specific studies published by NAS in accordance with the mandate to evaluate the program originating in P.L. 106–554 include:

- An Assessment of the SBIR Program at the Department of Energy (June 2008)
- An Assessment of the SBIR Program at the Department of Defense (November 2007)
- An Assessment of the SBIR Program at the National Institutes of Health (November 2007)

[8] National Research Council, "An Assessment of the Small Business Innovation Research Program," 2007.

- An Assessment of the SBIR Program at the National Science Foundation (July 2007)
- An Assessment of the Small Business Innovation Research Program (July 2007)
- SBIR and Phase III Challenge of Commercialization (February 2007)
- SBIR: Program Diversity and Assessment Challenges (September 2004)
- Capitalizing on Science, Technology, and Innovation: An Assessment of the Small Business Innovation Research Program—Project Methodology (September 2004)

The wealth of information uncovered by this comprehensive effort to study the SBIR program informed the Committee's work in drafting reauthorization legislation. Additional NAS studies to be released include:

- An Assessment of the SBIR Program at the National Aeronautics and Space Administration (In Review)
- Revisiting the Department of Defense SBIR Fast Track Initiative (In Draft)
- Venture Funding and the NIH SBIR Program (In Draft)

GAO Study: Additionally, GAO conducted a review of the SBIR program at the request of Senators Kerry and Kennedy, later joined by Senators Snowe and Enzi and Congressman Manzullo, that studied the impact of a 2002 SBA Office of Hearings and Appeals decision that clarified the definition of a small business for the purposes of the SBIR program. The purpose of the review was to look at the agencies with the largest SBIR budgets to examine the extent to which firms with venture capital participated before and after the clarification, including those firms majority owned and controlled by multiple venture capital companies. The goal of the study was to determine what role venture capital and firms majority owned and controlled by multiple venture capital companies should play in the SBIR program, as well as the impact that the participation of these firms had on the program and the country's innovation.

The report, entitled "Small Business Innovation Research: Information on Awards Made by NIH and DoD in Fiscal Years 2001 through 2004,"[9] was released in April of 2006. It found that, over the period of the study, the number of awards and dollars to firms with venture capital went up at both the National Institutes of Health and the Department of Defense and the percentage of SBIR dollars to firms with venture capital went up at the National Institutes of Health and held steady at the Department of Defense. Due to a lack of publically available data on the ownership structure of firms with venture capital, it was not possible for GAO to determine which firms were majority owned and controlled by venture capital companies; however, it is generally acknowledged that the numbers from Fiscal Years (FY) 2001 and 2002 included awards to firms with venture capital, both majority owned and not, and that the numbers from FYs 2003 and 2004 did not include majority owned firms. The report also found that, on balance, firms with venture capital received larger awards, oftentimes well in excess of the established award levels of $100,000 for Phase I and $750,000

[9] GAO–06–565

for Phase II, and that awards were concentrated in a limited number of states. These findings helped to frame the Committee's deliberations on the matter of allowing businesses owned and controlled by multiple venture capital companies to be eligible to receive awards in Phases I and II of the SBIR program.

IV. DESCRIPTION OF BILL

Title I

Section 101 of the "SBIR/STTR Reauthorization Act of 2008" reauthorizes the SBIR and STTR programs for 14 years. Congress has a history of reauthorizing the SBIR program for long periods, including reauthorizations of eight years in 1992 and 2000. In 2006, the Committee on Small Business and Entrepreneurship attempted to make the program permanent as part of S. 3778. The SBIR program had existed for 24 years and had proven effective, and the Committee agreed that it was time to make the program permanent. The small business community also argued that the program should be made permanent, not only because it had proven effective, but also because it should be stable and not in jeopardy of lapsing. They feared a reoccurrence of what happened in 2000, when the program was last set to expire; the program was not reauthorized by September 30th and was not considered to be authorized under the series of continuing resolutions.

However, opponents of making the program permanent argued that, without reauthorizations built into the program, Congress would not regularly assess the program and make needed changes. Therefore, striking a balance between permanency and past longer reauthorizations, this bill extends the program for 14 years. A reauthorization of 14 years factors in the increase in the SBIR allocation, which is phased in over ten years, and sets the date so that it does not coincide with a presidential election year. The bill addresses concerns of oversight by building in assessments by the NAS to be published every four years.

Section 102 concerns the SBA's Office of Technology. Efforts to strengthen American competitiveness through small businesses begin with this office, which administers and monitors the implementation of both the SBIR and the STTR programs governmentwide. As these programs have grown, the responsibilities of the Office have increased, such as to monitor government-wide compliance with the SBA's SBIR and STTR Policy Directives, to carry out the FAST and ROP programs, and to carry out the President's Executive Order 13329, Encouraging Innovation in Manufacturing. At the same time, the budget and staff for this Office have decreased. More specifically, since FY 1991, the SBIR and STTR programs have more than doubled, growing from $500 million to about $2 billion a year, yet the budget for the Office of Technology has been cut by more than half. According to the SBA's "Historical Summary, Office of Technology," in 1991, the Office of Technology had a budget of $907,000 and 10 positions. Today, the Office of Technology has a budget of $41,000 and four positions.

The Committee has raised this issue with the agency on numerous occasions over the years, in budget and confirmation hearings and in letters, yet the problem has only gotten worse with regard to the resources and stature for this office. Consequently, there has

been inadequate oversight of participating agencies' compliance with the 2.5 percent allocation requirement, as well as of other compliance violations that have put at risk significant SBIR dollars. For example, at the Missile Defense Agency, at risk was $75 million in FY 2002 and $93 million in FY 2003; at the Air Force, in FY 2005, at risk was $175 million; and, in FY 2007, at risk was $260 million at the Army and Air Force. Congress intervened to ensure that the agencies awarded the appropriate amount in SBIR awards as opposed to transferring money to other accounts. As another example, the SBA's FY 2003 annual reports on the SBIR and STTR programs reported two different Department of Defense extramural budgets for research and development (the budget in one report exceeding the same budget in another report by about $3 billion), and, despite that significant discrepancy, the SBA did not have the resources to adequately review the reports to determine which one was correct and wrongly declared that the Department of Defense and other agencies complied with the SBIR and STTR programs' requirements.

The Committee urges the agency to request that the Office of Management and Budget (OMB) and the Administration support requests which are reasonable for the Office of Technology to successfully operate and to carry out its management, data collection, and reporting requirements. This is particularly important given that this legislation places added emphasis on data collection and database maintenance, in order to remedy comments included in the NAS report and the GAO report that the SBIR and STTR programs are insufficiently data-driven. For example, right now, the most recent state-by-state award information available on SBA's website dates to 2004, at least two years behind what should be available. The Office of Technology simply does not have the staff or funding to maintain even basic functions. Also, the bill requires that the Office of Technology be headed by an Assistant Administrator for Technology who will report only to the Administrator and that the office be independent from the Office of Government Contracting. The SBIR and STTR programs, which the Office of Technology is charged with overseeing, disburse billions of dollars in awards on an annual basis, and the Committee believes that it must have the stature and resources to defend the interests of small businesses that utilize these cross-agency programs.

To stimulate America's innovation economy and to remedy the continued underrepresentation of small businesses in federal research and development, sections 103 and 104 of the bill increase the allocations for both programs, from 2.5 percent to 3.5 percent for SBIR and from 0.3 percent to 0.6 percent for STTR. These increases are to be phased in over the course of ten years in the case of SBIR and six years in the case of STTR, in order to allow the agencies to adjust to the increase. The increase in the SBIR allocation would not apply to the Department of Health and Human Services, and, at the Departments of Defense and Energy, the additional funds would be used, to the greatest extent possible, for the purposes of furthering the technology readiness levels of SBIR projects, including to conduct testing and evaluation, and not for Phase I and Phase II awards. Given the successes of the SBIR and STTR programs and the high praise they have garnered from the

National Academy of Sciences, the Committee believes that these increases to the allocations are warranted.

Further, the increases are moderate compared to past legislation. A doubling of the allocation was proposed in S. 2111, the "Small Business Growth Initiative Act of 2005," introduced on December 15, 2005, by Senator Evan Bayh, and later passed unanimously by the Committee as part of S. 3778, the "Small Business Reauthorization and Improvements Act of 2006," introduced by Senator Snowe in the 109th Congress. However, the bill was never considered by the full Senate, in part because of holds that this provision and other provisions generated, and all subsequent proposed increases in the SBIR allocation have been strongly opposed by some, in part based on arguments that such increases were not warranted in the absence of a systematic and comprehensive performance evaluation to determine the success of the program.

The Committee is not indifferent to these criticisms. However, a systematic and comprehensive evaluation of SBIR by the National Academy of Sciences is now available and its conclusions are unequivocally positive for the SBIR program. Evidence from this respected source suggests that the SBIR program both contributes to university research and education in science and technology and is an important catalyst for bringing basic research out of labs and into the marketplace. Small businesses employ twice as many scientists and engineers as all American universities combined and the SBIR program has the implicit goal of utilizing the innovative capacities of this large sector of the science and technology community and linking it to the resources of academic research institutions.[10] The 2007 National Academy of Sciences assessment of SBIR applauds the program's contribution towards linking universities and small businesses in innovation, as is evident by the following facts:

- More than two-thirds of SBIR companies report that at least one founder was previously an academic;
- About one-third of SBIR company founders were most recently employed as academics before founding the company;
- Over a third of SBIR projects cite direct university involvement with:
    - 27 percent of projects having university faculty as contractors on the project;
    - 17 percent using universities themselves as subcontractors; and
    - 15 percent employing graduate students.

It is clear that increases in the SBIR allocation will invest money in research, contracting, internships, and other collaborative activities done with universities, with the contracting and patenting activities with SBIR companies being a sizable source of revenue for universities as well. The university-industry partnerships that SBIR creates are crucial in that they provide an applied research and commercialization focus that otherwise likely would not be present in university research. More specifically, the partnerships are important in exposing faculty and the next generation of scientists and engineers to commercial research and development. SBIR businesses provide graduate and undergraduate students

[10] National Science Foundation, Science and Engineering Indicators 2006.

with hands-on experience and job opportunities that universities would be unable to provide alone. The STTR allocation increase will likewise benefit universities and efforts to bring university-based research into the commercial marketplace, as a partnership with a research institution, such as a university, is a requirement of all STTR award recipients.

Furthermore, the same National Academy of Sciences report states that about half of small business respondents in SBIR across all agencies had results from their SBIR work published in a peer-reviewed scientific publication. In particular, at the National Institutes of Health, this percentage was high, with 53.5 percent companies publishing a scientific paper and two-thirds of those companies having published multiple times.[11] This proves that SBIR projects are of high quality and that the program is a mechanism for the dissemination of knowledge across the science and technology community.

The Committee believes that the SBIR and STTR programs are vital to improving research and education in partnership with our nation's universities and federal agencies, as well as to unleashing American innovation and making the United States more competitive globally. Yet, the Committee understands the importance of basic research conducted by our federal agencies and universities, and, in light of tight federal research and development budgets, the Committee proposes a much more modest increase than the doubling of STTR that was included in S. 3778. Further, as stated earlier in this section, there is no increase to the allocation at the Department of Health and Human Services, a major source of concern to universities and patient groups. The Committee would have preferred that there be an increase to the allocation at all SBIR agencies; however, it agreed to exempt the Department of Health and Human Services in order to prevent holds on the bill that threatened Senate passage of the bill before the program's expiration. Last, the allocation increases at the Department of Defense and the Department of Energy are directed to further the technology readiness levels of SBIR projects, but are not to be used for Phase I and Phase II awards.

In order to adjust for inflation, acknowledge the growing costs of research, and sustain the quality of applications, section 105 of the bill proposes an increase in the award size guidelines, from $100,000 to $150,000 for Phase I awards and from $750,000 to $1 million for Phase II awards. The Committee believes that these increases in award size are timely, as the last increase in Phase I and Phase II awards was 16 years ago, in the 1992 reauthorization for SBIR. The "Small Business Reauthorization and Improvements Act of 2006" (S. 3778) proposed similar increases in award sizes, capping Phase I grants at the same $150,000 level but capping Phase II grants at $1.25 million. The award sizes in S. 3778 passed the Committee along with a doubling of the SBIR allocation. However, this bill does not increase the allocation to that extent. To increase the size of awards without substantially increasing the amount of dollars available necessarily reduces the number of awards that can be given and, consequently, the number of tech-

[11] National Research Council, "An Assessment of the Small Business Innovation Research Program at the National Institutes of Health," 2007.

nologies developed and companies that benefit from SBIR. The award levels in this bill are intended to strike the appropriate balance between providing awardees with sufficient resources while continuing to generate ideas. The bill also mandates adjustments to these award levels every three years to account for inflation. Finally, these amounts are not caps but, rather, guidelines. However, the bill does include a cap as well, and the maximum Phase I or Phase II award would be one and a half times the size of the suggested award sizes.

This cap serves to address the issue of jumbo awards that exceed the award guidelines and cut into the number of awards that can be given out by the agencies. For example, the 2006 GAO review of the program found that NIH had made a Phase I award of $1.7 million and a Phase II award of $6.5 million. Small businesses, particularly those in rural states, have complained to the Committee for years that jumbo awards hurt them because they reduce the number of grants and awards that can be given out. In the case of a Phase I for $1.7 million, that eliminates the possibility of 16 awards of $100,000. In the case of a Phase II for $6.5 million, that eliminates the possibility of almost seven awards of $750,000. To address this issue, the bill prohibits federal agencies from making an award more than 50 percent higher than the guidelines established in this Act, which is a cap of $225,000 for Phase I awards and $1.5 million for Phase II awards. Per existing requirements, the agencies must also continue to report to the SBA when they exceed the guidelines amount of $150,000 and $1 million and provide a justification. The GAO and the NAS found that it was hard to assess the full impact of jumbo awards because the NIH, as well as other agencies, according to the NAS, did not comply with reporting requirements or provide sufficient justifications. The DoD had much better data, but the Committee believes that language is needed to strengthen the reporting requirements government-wide to help guide Congress in future policy decisions.

Section 106 of the bill provides for portability of awards between different federal agencies and between the two SBIR and STTR programs by permitting eligible small business concerns to qualify for post-Phase I awards at another agency or through the other program. These measures ensure that small innovative businesses receive a full opportunity to participate in federal research and development and that the nation receives the full benefit of small business innovations. Today, research and development efforts to meet national priorities are conducted across federal agencies; for instance, the Departments of Energy and Agriculture work together on renewable energy research, and biodefense research is pursued by the Departments of Defense, Homeland Security, and Health and Human Services. At the same time, research project needs may require changes in relationships between the small business and its research institution partner. The Committee believes that the additional flexibility introduced by this legislation into the SBIR and STTR programs is much-needed.

Section 107 of the bill specifically prohibits agencies from using Phase II invitations or any other screening process that would inhibit Phase I awardees from applying for a Phase II award in a competitive process open to all Phase I awardees. The Committee believes that this is an unfair practice which not only penalizes

those companies that take the largest risk with unproven technologies and deprives such companies of the opportunity to take the lessons learned from Phase I into a Phase II effort, but also limits competition at Phase II. There is no provision in the current statute that specifies that there is a separate process between Phase I and Phase II, and this bill clarifies that it is Congress' intent that there not be anything to limit competition for Phase II awards.

Section 108 of S. 3362 includes a compromise between Senators Kerry and Bond that would allow firms majority owned and controlled by multiple venture capital firms to participate in the SBIR program. The extent to which companies majority owned and controlled by multiple venture capital companies should be able to participate in SBIR was the foremost issue to reauthorizing the SBIR program. The venture capital issue stems from a 2002 decision by the SBA's Office of Hearings and Appeals that clarified that a business must have 500 or fewer employees, including affiliates, and be 51 percent owned and controlled by individuals to be eligible for the SBIR program and that venture capital companies are considered entities, not individuals, for the purposes of determining ownership. That clarification adversely affected some firms that had participated in the SBIR program, because they could no longer self-certify that they met the definition of a small business and, therefore, no longer could participate. Biotechnology firms that had participated in the SBIR program at NIH prior to the 2002 decision were most affected.

During the 109th Congress, in July 2006, when the Committee marked up S. 3778, a comprehensive SBA reauthorization bill that included a title on reauthorization of the SBIR and STTR programs, the Committee adopted an amendment put forward from Senator Bond that would have allowed all qualifying agencies to direct up to 25 percent of their SBIR budgets to companies that are majority owned by multiple venture capital companies. Senator Bond introduced the amendment in part because he was concerned that the 2002 decision by SBA had become a roadblock for many small businesses, especially small biotech and life science companies, working to develop life saving cures, and that the decision was leading to a decline in the number of applications to the NIH SBIR program. Senator Bond spoke in support of the critical early stage research. Though there was no vote on the amendment in 2006, Senator Kerry spoke out against it, in part because he was concerned that directing up to 25 percent of SBIR funds to firms majority owned and controlled by venture capital firms, on top of the almost 22 percent, in FY 2004, already going to firms with venture capital (but that are not majority owned) at NIH, would steer too many of the program's projects away from early-stage, high risk research that would not be done but for the government and instead towards projects with larger potential market shares and a greater potential to deliver better returns for investors in a shorter amount of time. Furthermore, the Administration opposed the majority owned venture capital provision in S. 3778, as did other Senators, and this was one of several issues that attracted holds and prevented floor consideration. In order to have a better chance of getting an SBIR reauthorization bill through the Senate, it was necessary to moderate the provision. Senators Snowe, Lieberman,

and Coleman played a role in reaching the compromise adopted as part of S. 3362.

Instead of allowing all 11 agencies to apply to direct up to 25 percent of their SBIR funds to firms majority owned and controlled by multiple venture capital firms, the agreement adopted as part of S. 3362 would allow NIH to apply to the SBA to award up to 18 percent of its SBIR dollars to companies majority owned and controlled by multiple venture capital companies. The remaining qualifying SBIR agencies would be able to apply to award up to 8 percent of their SBIR dollars to this class of firms. It is important to note that this is the percentage of dollars that would be allowed to be awarded to companies majority owned and controlled by venture capital companies (the companies that are currently ineligible). Companies that have some venture capital investment but that are still majority owned and controlled by individuals have always been eligible for SBIR dollars and will remain eligible to compete for the entirety of the SBIR allocation under this legislation.

The Committee believes that this compromise is reasonable, addressing each side of the venture capital debate and paving the way for the Committee to act and the full Senate to pass this reauthorization legislation. For the small businesses that opposed changing the eligibility rules, this bill's compromise preserves more SBIR dollars for companies that are not majority owned and controlled by venture capital companies than the 2006 amendment would have. Based on 2006 data, the most recent data available, it is estimated that this compromise would preserve an additional $69 million at NIH and $147 million at the other agencies, compared to the one adopted in 2006.[12] It was particularly important to moderate these percentages because, unlike S. 3778, this legislation (SBIR/STTR Reauthorization Act of 2008) does not double the SBIR allocation (although it does increase the percentage of the allocation at all agencies except NIH), and the Committee needed to adjust the percentages to offset concerns that allowing these new entities to participate would crowd out small businesses. This may also be the case particularly for those in rural states where there is less venture capital investment and where GAO found little to no SBIR awards to firms with venture capital, further diminishing their participation in SBIR, the most important government research and development program available to small businesses. Specifically, GAO found that, in 17 largely rural states, none of the firms that had received SBIR awards from NIH had received venture capital investment, and, in 21 largely rural states, none of the firms that had received SBIR awards from DoD had received venture capital investment.[13] It is also to the benefit of small businesses currently participating in the program that this bill maintains the affiliation rule, helping to keep current participants on a level playing field with the new class of companies that will be made eligible.

The Committee believes that this is also a positive compromise for the companies that have been supporting a change to the rules, because it provides companies majority owned and controlled by

[12] 2006 SBIR Program Data, SBA Office of Technology, provided to the Committee on March 10, 2008.

[13] "Small Business Innovation Research: Information on Awards Made by NIH and DoD in Fiscal Years 2001 through 2004," GAO 06–565, April 2006, p. 20.

multiple venture capital firms with access to more SBIR dollars, proportionately and dollar-wise, than they were getting before the SBA clarified in 2002 that such firms were not eligible to participate in the program. For example, before the clarification, in 2001, GAO found that firms with venture capital received 14 percent, or $57 million, of all SBIR dollars at NIH, and, in 2002, they received 14 percent, or $72 million, of all SBIR NIH dollars.[14] These dollars were shared between firms that were majority owned and controlled by multiple venture capital firms and those that were not. Based on 2006 SBIR data, the most recent available, this offer would make it possible for companies owned and controlled by multiple venture capital companies to get up to 18 percent, or $105 million. These dollars would not be shared with companies with venture capital that are not majority owned and controlled by venture capital companies. If the full 18 percent is utilized, this could be a possible increase of 84 percent over the amount of funds firms with venture capital were sharing in 2001, and a possible increase of 45 percent over what they were sharing in 2002.

The same GAO study also looked at DoD, where it found that, in 2001, companies with venture capital received 5 percent, or $34 million, of all SBIR dollars and, in 2002, they received 7 percent, or $48 million, of all SBIR dollars.[15] Again, based on the most recent SBIR data available, this offer would make it possible for companies owned and controlled by multiple venture capital firms to get up to 8 percent, or $91 million, of DoD's SBIR dollars all to themselves. If the full 8 percent is utilized, this could be a possible increase of 65 percent over the amount of funds firms with venture capital were sharing in 2001, and a possible increase of 47 percent over the amount of funds they were sharing in 2002.

As was the case with S. 3778, the affiliation rule itself and the 500 employee standard remain unchanged in this bill, meaning that all SBIR and STTR applicants, whether majority-owned by venture capital companies or not, must still have 500 or fewer employees, including the employees of their affiliates. In the case of companies majority owned and controlled by multiple venture capital companies, this means that the employees of venture capital companies that control or have the power to control the SBIR applicant, as well as the employees of portfolio firms of those venture capital companies that the venture capital companies control or have the power to control, will be added together and, in aggregate, must be 500 or fewer.[16] In testimony before Congress and in Statements of Administration Policy, the SBA has stressed the importance of the affiliation rule because it allows them to look into who is controlling the firm and the amount of resources that they bring to the table. Affiliation, as illustrated in the Federal Regulations, is determined by the "totality of the circumstances" and is the current regulatory tool to ensure that a small firm is not controlled by a large firm. The SBA is also concerned about the precedent that waiving the affiliation rule would set for other SBA programs. Furthermore, some small businesses have argued to the Committee that it would be unfair to exempt the employees of venture capital firms and the employees of their portfolio firms from the affiliation

[14] GAO 06–565, p. 32.
[15] GAO 06–565, p. 32.
[16] 13 CFR 121.103.

rule, allowing them to play by different rules, unless an alternative size standard is established, because it would create an unfair playing field, particularly in the biotech industry, where the majority of firms have fewer than 50 employees, significantly less than the current cap of 500 employees.[17] Other small businesses, especially biotech firms, are concerned that SBA is applying affiliation inconsistently, making it difficult to determine eligibility and self-certify. In addition, they are concerned about the process in which SBA applies affiliation to an SBIR applicant's minority investors' other portfolio companies that they argue are unrelated to the SBIR applicant or their research, which, therefore, also creates an unfair playing field.[18]

In addition, in order to address concerns from companies with venture capital that it is difficult to determine who their affiliates are and, therefore, whether they are, in fact, eligible to participate in the SBIR program, S. 3362 includes language to assist an SBIR applicant in interpreting the affiliation rule when self-certifying. Specifically, the bill directs the SBA to post a document on its website that helps SBIR applicants determine who is affiliated with them. Language is also in the bill that requires the SBA to update the relevant website information to keep it current and to respond in a timely way to requests from firms to determine if they are eligible.

While the affiliation rule is an administrative issue, and, therefore, does not require legislation to make any changes, the report also includes data collection requirements on the participation of firms with venture capital, both majority and non-majority owned, to help the Committee collect necessary information to assess how the SBA's existing affiliation rule is affecting the participation of firms and whether 500 employees, including those of affiliates, is a realistic limit. At the markup, Senator Cantwell expressed concern with the way in which the affiliation rule is currently being applied, and the data collection requirements will serve to build a base of information to guide future legislative or administrative changes.[19]

On November 22, 2006, the Court of Appeals for the Federal Circuit ruled in favor of the U.S. Air Force dismissing Night Vision's breach of contract claim. The Committee believes that the Federal Court, in the case of Night Vision v. United States, disregarded the special acquisition preference intended by the Congress for Phase III awards by effectively placing upon the small businesses the burden of proof that a Phase III award would be practicable. The Committee believes that any questions with regard to the capacity of small business concerns to perform as Phase III awardees should be established by the relevant agency. Therefore, section 109 of the bill codifies and clarifies the existing special acquisition preference.

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[17] Critical Technology Assessment of Biotechnology in U.S. Industry (October 2003) U.S. Department of Commerce Technology Administration and Bureau of Industry and Security, *http://www.technology.gov/reports/Biotechnology/CD120a_0310.pdf*. And testimony before Congress from the Biotechnology Industry Organization on July 22, 2004; June 17, 2005; June 25, 2005; and July 27, 2005.

[18] For further discussion of the affiliation issue, see the Committee Roundtable, "Reauthorization of the Small Business Innovation Research Program: How to Address the Valley of Death, the Role of Venture Capital, and Data Rights," Transcript of Proceedings, October 18, 2007, p. 50–117.

[19] See transcript of the markup of S. 3362, the "SBIR/STTR Reauthorization Act of 2008," July 30, 2008.

Section 110 of the bill seeks to improve the collaboration of SBIR firms with federal labs. In 2002, the SBA proposed and subsequently implemented a requirement that SBIR firms seeking to subcontract with federal laboratories and research and development centers obtain a waiver from the SBA to enter into such subcontracts. Such subcontracts are typically concluded through cooperative research and development agreements (CRADAs). As a result, small firms which plan to utilize the world-class technical facilities or research capabilities of federal labs may be denied a waiver even after receiving their SBIR awards. The Committee believes that greater cooperation between small businesses and federal labs is a worthy goal, though agencies and departments cannot demand that a small business work with a federal lab in order to win the project. For that reason, the bill permits small businesses to subcontract portions of the work on SBIR and STTR awards to federal labs and research and development centers without having to seek a waiver from the SBA, as the SBA currently requires. Small businesses receiving SBIR and STTR awards where a portion of the work is subcontracted to federal labs and research and development centers shall not perform a smaller percentage of work than is required by the SBIR and the STTR Policy Directives. At the same time, the Committee acknowledges that the SBA waiver process was instituted in response to attempts by federal agencies to recapture SBIR funds through the CRADA subcontracting process regardless of scientific merit. Consequently, federal agencies shall not require small businesses to subcontract with federal labs and research and development centers as a condition of receiving SBIR or STTR awards, and the SBA shall ensure that no such requirements whatsoever are imposed. SBIR and STTR awards shall be based strictly on merit, and participation of federal labs and research and development centers in SBIR and STTR research shall be considered only to the extent that it strengthens the merits of the proposals.

A provision authored by Senator Cardin clarifies that grantees who have entered into Cooperative Research and Development Agreements and are housed in NIH or other federal facilities can continue to receive CRADA grants and still retain or apply to the SBIR program. The practices of various national laboratory administrations have resulted in interpreting the rules differently. The effect has been to deny CRADA recipients the opportunity to keep or apply for SBIR funds. This amendment clarifies the language and permits contemporaneous participation in both the SBIR and CRADA programs.

To promote effective enforcement of the SBIR and STTR Policy Directives, section 111 requires the SBA to notify Congress of its appeals or other actions to enforce the Policy Directives. Likewise, the Committee expects that the SBA Administrator will be promptly informed concerning any case or controversy surrounding the SBIR or the STTR program. The Committee believes that SBA must always be presented an opportunity to defend its programs in legal proceedings.

Title II

In order to strengthen the technological competitiveness of small businesses in all fifty states and to improve participation rates in

the SBIR and STTR programs from states all across the country, section 201 of S. 3362 reauthorizes the Federal and State Technology Partnership Program (FAST) and the Rural Outreach Program through 2014 and increases the amount of dollars allocated to the Rural Outreach Program from $2 million to $5 million per year. As part of the 2000 Reauthorization of the SBIR program, Congress created the Federal and State Technology Partnership Program. FAST was created to strengthen the technological competitiveness of small business concerns in all 50 states by providing competitive matching grants to states to help support the SBIR and STTR programs. These grants are traditionally used to raise awareness of SBIR and STTR, assist technology transfers by universities to small businesses, provide technical assistance to firms participating in the SBIR program, and encourage commercialization of technology developed through SBIR funding. The FAST program has proven vital to rural states, which have traditionally been in the lower tier of states in terms of SBIR/STTR awards and total dollars. For this reason, technical assistance provided under FAST grants is extremely important to rural small businesses and universities. In general, the more SBIR applications that are submitted by small businesses in a state, the more SBIR awards are made in that state.

While rural states have utilized the FAST program successfully, the Administration has tried to eliminate it in its budget requests, and the Committee believes that rural areas need additional technical assistance to help their small businesses compete in the SBIR program and so has reauthorized and enhanced the program. Currently, each participating state that receives FAST awards is required to match each federal dollar that is provided with state funds. The Committee supports this approach, as each recipient should match funds considering that the federal government is putting up the majority of funds for these activities. As the program is currently structured, the 18 states receiving the fewest SBIR Phase I awards are required to put up 50 cents for each federal dollar. The lower tier of states requires additional technical assistance, so they should have a greater incentive to apply for these grants. Next, the 16 states receiving the greatest number of Phase I awards are required to match dollar for dollar each federal dollar awarded. States not included in either of these two categories, those in the middle tier, are required to match 75 cents for each federal dollar. There is also a special match requirement for low-income areas, which is 50 cents for each federal dollar.

In reviewing this current structure, the Committee believes that rural areas and rural small businesses could benefit from a reduced match requirement for the FAST program and adopted a provision from Senator Landrieu, taken from S. 3343, to do so. Just as low-income areas and states which are the bottom 18 states for SBIR awards are provided a 50 cent match requirement, FAST award recipients in rural areas should be provided a reduced match requirement. The bill makes this important revision and would also further reduce the match requirement, to 35 cents, for FAST grants from rural areas which are also in the bottom 18 states. These changes would provide increased technical assistance and would provide assistance where it is most needed—our rural small business and universities. Furthermore, this change does not affect the

allocation of SBIR program awards but does provide rural areas with a level playing field when competing for these awards.

Section 201 also includes a provision to encourage the establishment of initiatives to reach out to traditionally underutilized communities with the goal of increasing their participation in the SBIR and STTR programs. This is one of the key recommendations of the 2007 comprehensive report on the SBIR program issued by the National Academy of Sciences, which found the following:

• Academics represent an important future pool of applicants, firm founders, principal investigators, and consultants. Recent research shows that owing to the low number of women in senior research positions in many leading academic science departments, few women have the chance to lead a spinout. According to Peter Rosa and Alison Dawson, "Underrepresentation of female academic staff in science research is the dominant (but not the only) factor to explain low entrepreneurial rates amongst female scientists."[20]

• Agencies do not have a uniformly positive record in collecting data and monitoring funding flows for research by women and minority-owned firms.

• While support for women-owned businesses is increasing, support for minority-owned firms has not increased. For example, the share of Phase I awards to minority-owned firms at DoD has declined quite substantially since the mid 1990s and fell below ten percent for the first time in 2004 and 2005. Data on Phase II awards suggest that the decline in Phase I award shares for minority-owned firms is reflected in Phase II.

These findings by the NAS also led the Committee to establish additional reporting requirements on awards to women and minority-owned firms, discussed later in the report.

Further, section 202 of the bill includes a provision from Senator Coleman, originally proposed as an amendment to S. 3778, in the 109th Congress, which establishes a five-year workforce development grant pilot program to match up innovative small businesses with college students studying science, technology, engineering, and math. The proposal would provide SBIR grantees with a 10 percent bonus grant, for either Phase I or Phase II SBIR grants, with a total maximum award of $10,000 per year for small businesses that provide opportunities to these students.

In order to provide SBIR awardees with a more appropriate amount of technical assistance, section 203 of the bill increases the amount of discretionary technical assistance that may be given by federal agencies from $4,000 per Phase I award to $5,000 and from $4,000 per year of a Phase II award to $5,000 per year. To make the law consistent, the bill states that this technical assistance shall be in addition to the SBIR award for both Phases I and II. To address concerns from small businesses that the technical assistance provider that they are required to use may not provide them with the type of technical assistance that would best suit their needs, the bill includes a provision allowing award recipients to seek out their own technical assistance provider and to receive the same amount as do those who use the agency's contracted provider. Finally, the bill clarifies that agencies may only pay the con-

[20] Peter Rosa and Alison Dawson, "Gender and the Commercialization of University Science: Academic Founders of Spinout Companies," Entrepreneurship & Regional Development, Volume 18, Issue 4, July 2006, p. 341–366.

tractor for those recipients who utilize the services provided by the agency's technical assistance provider. Participants at the Committee's roundtable on August 1, 2007, had expressed concerns that federal agencies were bundling the technical assistance contracts and that technical assistance providers were being compensated for services that were not used.

During the 108th Congress, Senator Snowe sponsored and Senator Kerry cosponsored S. Amdt. 2531, creating the SBIR Commercialization Pilot Program (CPP) at the Department of Defense, which incorporated relevant amendments offered by both Senators to S. 1042, the FY 2006 Defense Authorization bill. The CPP authorized incentives for prime contractors and provided assistance to SBIR firms in order to facilitate Phase III awards at the prime contract and the subcontract level. Examples of appropriate incentives are provided in the May 17, 2006, guidance letter from Senators Snowe and Kerry and Congressman Donald Manzullo (at the time Chairman of the House Committee on Small Business) to the Undersecretary of Defense Kenneth Krieg and in the White Paper of the Small Business Technology Council, Incentives and Technology Transition: Improving Commercialization of SBIR Technologies in Major Defense Acquisition Program (Robert-Allen Baker, May 2006). The Committee believes that CPP is a valuable mechanism to move technologies across the "valley of death," and section 204 of this bill strengthens CPP at the Department of Defense and reauthorizes the program through 2014.

The bill also includes a provision in section 205 that permits civilian SBIR agencies to establish their own commercialization pilot programs and authorizes these pilot programs through 2014. In response to questions during a Committee hearing on July 12, 2006, Dr. Charles Wessner of the National Academies testified that efforts to promote greater funding of Phase II technologies would be valuable, and the Committee has included these pilot programs for that purpose. The goal of the commercialization pilot programs is to help move existing Phase II technologies across the "valley of death" and closer to the commercial marketplace. Federal agencies would be permitted to use up to 10 percent of their SBIR and STTR dollars to make awards under a commercialization pilot program, and awards made under these pilot programs would be allowed to exceed the cap on award size, up to two times the award cap, or $2 million per award. To address concerns that these awards would cut into the SBIR allocation and to further facilitate the strategic connections that will allow for SBIR and STTR technologies to be transitioned into a government system or to be commercialized, awards given under these pilot programs would need to be matched by private or federal non-SBIR, non-STTR dollars.

Recognizing that nanotechnology has the potential to revolutionize our way of life and to make a significant contribution to our economy moving forward, section 206 of the bill encourages the submission of applications for support of nanotechnology-related projects. This provision comes from S. 3274, "National Nanotechnology Initiative Amendments Act of 2008," sponsored by Senator Kerry and cosponsored by Senator Snowe. Nanotechnology involves the understanding and control of matter at scales between 1 and 100 nanometers and includes nanoscale science, technology, and engineering. In the eight years since the creation of the Na-

tional Nanotechnology Initiative, it has become clear that our ability to manipulate, engineer, and manufacture nanoparticles provides unlimited potential for innovation and growth throughout our economy. For instance, an estimated $50 billion in products worldwide incorporated nanotechnology in 2006, and that figure has been projected by some to reach $2.6 trillion over the next eight years. From technologies to improve the capabilities of our military to life-changing medical devices, nanotechnology has demonstrated its unique ability to break barriers and to expand the realm of what is possible. The Committee believes that it is important for the federal government to encourage the development of nanotechnology-related projects and that the SBIR and STTR programs are suitable mechanisms for furthering progress toward this goal. This provision sunsets after five years, because the Committee believes that emphasis on certain sectors should not exist in perpetuity but, rather, should be updated to be relevant to current needs and challenges.

The bill also includes a pilot program, in section 207, designed by Senator Lieberman, taken from S. 2988, to improve the operations of the SBIR program at NIH. Each year, patients are diagnosed with an increasing number of orphan diseases. Many of these diseases lack an appropriate treatment. The need for effective and affordable treatments, vaccines, or cures for these diseases is growing. According to the findings of the National Academy of Sciences' 2007 report, the SBIR program at NIH could be enhanced through the following means: establishment of a centralized advisory body that makes recommendations based on comprehensive metrics, further development of the program's ability to capture this data, enhanced flexibility in terms of addressing scientific translation and product development, and a reduction of the time between Phase I and Phase II awards.

Pursuant to these recommendations, this section establishes an advisory board at the NAS to improve the utilization of data in decision-making. The board will be comprised of the NIH Director, the Director of the NIH SBIR program, relevant senior NIH managers, and subject matter experts. In addition, to bring business development experience to the board, one-half of the members will be prior SBIR grantees. The principal purpose of the board is to collect the relevant metrics to determine the effect of various SBIR program initiatives on commercialization. The board will also review a new requirement of the SBIR program at NIH. Program managers, when awarding grants and contracts, will emphasize applications that from the onset, identify putative products and services that may enhance the development of cures and therapies.

Additionally, this section strengthens data-capture to ensure that decisions aimed at encouraging the translation of basic science to marketed treatments are evidence-based. An emphasis is placed on collecting the metrics identified in the National Academy of Sciences' 2007 review of the SBIR program at NIH.

The NAS recommended further enhancing the flexibility of the NIH's SBIR program and this section seeks to provide the SBIR program at NIH with that opportunity. Prior to adoption of new procedures, it is important to test ideas on a smaller scale. This section permits one percent of SBIR's budget at NIH to be utilized to establish pilot programs in order to investigate new approaches

to enhancing the development of novel products for disease treatments. The pilot programs may be designed to establish inventive new strategies or a program may focus on program management initiatives. These may include: adding successful SBIR grantees during the review process, hiring experienced business development personnel to staff positions to bolster the programs' subject-matter expertise, separating the scientific and commercial review process, and assessing the efficacy of awarding larger grants on the overall success of product development. The NIH director will be required to submit a report to Congress and the NAS advisory board reviewing these programs.

Last, the provisions adopted from Senator Lieberman will encourage the director of the SBIR program at NIH to reduce the time period between Phase I and Phase II grants to six months, to the greatest extent possible. This section will sunset five years after enactment.

Title III

In order to address continued concerns that the SBIR and STTR programs are insufficiently data-driven and to provide Congress with a better base of information to use when considering future policy changes to the programs, the bill includes many oversight and evaluation provisions, encompassing sections 301 through 309. The data collection and reporting requirements focus, in particular, on the effect of the change made in the bill to allow firms majority owned and controlled by multiple venture capital companies to participate in the SBIR program, on the involvement of women, minorities, and people from rural areas in the programs, and on collaboration between small businesses participating in the programs and universities. To ensure that this information is collected, synthesized, and used to improve the progress toward the programs' goals, the bill requires the agencies to maintain databases and requires the SBA to coordinate the databases so that the information is centralized and easily accessible. Section 307 of the bill extends the NAS' review of the SBIR program and requires NAS to make recommendations on the program every four years.

In order to address concerns that federal agencies are inaccurately calculating their extramural research and development budgets, from which the SBIR and STTR allocations are determined, section 306 of the bill directs the GAO to conduct periodic fiscal and management audits of the program to verify that agencies are meeting the allocation requirements of the SBIR and STTR programs. The Committee also directs the GAO to make a recommendation as to whether or not it would be more effective for the SBIR and STTR allocations to be determined based on the entirety of federal agencies' research and development budgets, internal and external.

The federal government spends over $50 billion a year in research and development contracts and billions more on contracts for goods and services which utilize innovative technologies. As a result, federal procurement spending can act as a strong force in stimulating small business innovation. Public authorities and officials in the European Union, the United Kingdom, Sweden, and other countries have proposed a three percent pro-innovation set-aside for their small and medium enterprises (SMEs). To retain

global competitive leadership, the Committee believes that the United States should consider adopting its own pro-innovation technology insertion goal for Phase III SBIR and STTR awards in all federal contracts for research, development, testing, and evaluation. This bill does not set such a goal, since there is currently no data from which to determine what a reasonable goal would be, but section 308 does establish reporting requirements on federal agencies that issue Phase III contracts in order to collect information to establish a baseline.

Section 309 of the bill addresses concerns that relevant SBIR and STTR intellectual property protections are not being properly enforced. To attract small businesses for participation in federal research and development, the SBIR and the STTR programs guarantee data rights protections to small business innovators. Unfortunately, the scope of these protections has been misconstrued by the U.S. Court of Federal Claims in the case of Night Vision v. United States. The Court mistakenly relied on the Federal Acquisition Regulation to exclude prototypes from statutory data rights protections, even though the Small Business Act clearly and unambiguously provides that prototypes are within the scope of research and development activities which are part of SBIR and STTR. However, because the Committee is concerned that there is a lack of information on the extent of these violations that would serve to justify policy changes, this bill requires the GAO to conduct a study of the programs to determine if federal agencies are adhering to the data rights protections of SBIR awardees and if any clarification of law or policy directives is necessary.

Title IV

Finally, section 401 of the bill requires the SBA to amend the SBIR and STTR Policy Directives to conform to the directives of the bill and to publish the policy directives, as amended, in the Federal Register.

V. COMMITTEE VOTE

In compliance with rule XXVI(7)(b) of the Standing Rules of the Senate, the following votes were recorded on July 30, 2008.

A motion by the Chair to adopt the "SBIR/STTR Reauthorization Act of 2008," to reauthorize the SBIR and STTR programs, and for other purposes, was approved by a unanimous 19–0 recorded vote with the following Senators voting in the affirmative: Kerry, Levin, Harkin, Lieberman, Landrieu, Cantwell, Bayh, Pryor, Cardin, Tester, Snowe, Bond, Coleman, Vitter, Dole, Thune, Corker, Enzi, and Isakson.

VI. COST ESTIMATE

In compliance with rule XXVI(11)(a)(1) of the Standing Rules of the Senate, the Committee estimates the cost of the legislation will be equal to the amounts discussed in the following letter from the Congressional Budget Office.

AUGUST 19, 2008.

Hon. JOHN F. KERRY,
Chairman, Committee on Small Business and Entrepreneurship, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 3362, the SBIR/STTR Reauthorization Act of 2008.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Susan Willie.

Sincerely,

PETER R. ORSZAG.

Enclosure.

S. 3362—SBIR/STTR Reauthorization Act of 2008

Summary: S. 3362 would extend and expand programs that require certain agencies to set aside portions of their research and development budgets for small businesses. The bill also would authorize appropriations to increase the number of small businesses participating in those programs. Finally, the bill would require participating agencies to develop new databases for program evaluation and business development and authorize several studies of the programs by the Government Accountability Office (GAO) and the National Academies of Science (NAS).

Based on information from the Small Business Administration (SBA) and other agencies, CBO estimates that implementing S. 3362 would cost $217 million over the 2009–2013 period, subject to appropriation of the necessary amounts. Enacting the bill would not affect direct spending or revenues.

S. 3362 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

Estimated cost to the Federal Government: The estimated budgetary impact of S. 3362 is shown in the following table. The costs of this legislation fall within budget functions 050 (national defense), 250 (general science, space, and technology), 270 (energy), 300 (natural resources and environment), 350 (agriculture), 370 (commerce and housing credit), 400 (transportation), 500 (education, training, employment, and social services), 550 (health), and 750 (administration of justice).

	By fiscal year, in millions of dollars—					
	2009	2010	2011	2012	2013	2009–2013
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Reauthorize SBIR/STTR Programs:						
Estimated Authorization Level	27	33	34	34	35	163
Estimated Outlays	21	31	34	34	35	155
Increase in R&D Budget Set-asides:						
Estimated Authorization Level	0	2	3	4	5	14
Estimated Outlays	0	1	2	4	5	12
FAST Program Reauthorization:						
Authorization Level	10	10	10	10	10	50
Estimated Outlays	2	5	9	10	10	36
SBIR-STEM Workforce Development Program:						
Authorization Level	0	1	1	1	1	4
Estimated Outlays	0	0	1	1	1	3

	By fiscal year, in millions of dollars—					
	2009	2010	2011	2012	2013	2009–2013
National Academy of Sciences Study:						
Estimated Authorization Level	4	0	0	0	0	4
Estimated Outlays	1	1	1	1	0	4
Additional Agency Activities:						
Estimated Authorization level	7	0	0	0	0	7
Estimated Outlays	3	4	0	0	0	7
Total Changes:						
Estimated Authorization Level	48	46	48	49	51	242
Estimated Outlays	27	42	47	50	51	217

Note.—SBIR = Small Business Innovation Research; STTR = Small Business Technology Transfer; FAST = Federal and State Technology Partnership; STEM = Science, Technology, Engineering, and Math.

Basis of estimate: Under current law, the Small Business Innovation Research (SBIR) program requires federal agencies with extramural budgets for research and development (R&D) that exceed $100 million per year to set aside 2.5 percent of that budget for contracts with small businesses. (Extramural expenditures are expenditures for activities not performed by agency employees.) Likewise, the Small Business Technology Transfer (STTR) program requires federal agencies with extramural budgets for R&D that exceed $1 billion per year to set aside 0.3 percent of that budget for cooperative research between small businesses and a federal laboratory or nonprofit research institution. SBA is authorized to coordinate and monitor activities under both programs. Eleven agencies currently participate in one or both programs, including the Department of Defense, the Department of Health and Human Services, the Department of Energy, the Department of Agriculture, the National Aeronautics and Space Administration, the National Science Foundation, and the Environmental Protection Agency.

The cost of those programs to the participating agencies consists primarily of personnel and associated overhead costs to solicit applications, prepare reports, and track outcomes. The organizational structures of such program offices vary. Some agencies have full-time staff members devoted to the SBIR and STTR programs, with other staff assisting as part of their duties; some have employees working part-time on the program.

Based on information from SBA and participating agencies, CBO estimates that implementing S. 3362 would cost $217 million over the 2009–2013 period, assuming appropriation of the necessary amounts.

Reauthorization of the SBIR and STTR programs

The bill would extend the SBIR program through 2022 and the STTR program through 2023. Under current law, the SBIR program is scheduled to terminate at the end of fiscal year 2008, and the STTR program is scheduled to terminate at the end of fiscal year 2009. Based on information from SBA and participating agencies, CBO estimates that administering the two programs will cost about $30 million in 2008 (about $2 million of that amount will be for SBA). CBO estimates that reauthorizing the SBIR program would cost $21 million in 2009. Extending the SBIR program and the STTR program would cost $155 million over the 2009–2013 period, assuming appropriation of the necessary amounts. (Continu-

ation of the two programs would cost an additional $35 million to $40 million a year after 2013.)

Increase in R&D budget set-asides for small businesses

S. 3362 also would increase the amount of each agency's R&D budget to be set aside for the programs starting in fiscal year 2010. For SBIR, the set-aside would increase by 0.1 percent each year over the 2010–2019 period, ending at 3.5 percent of each participating agency's R&D budget. For STTR, the set-aside would increase by 0.1 percent every two years over the 2010–2014 period, ending at 0.6 percent of each participating agency's budget. Based on information from SBA and the agencies, CBO expects that the expansion would lead to an increase in the number of applications received under both programs by more than a third over the 2009–2013 period. Assuming appropriation of the necessary amounts, CBO estimates that processing the additional applications would cost $12 million over the 2009–2013 period.

FAST program reauthorization

S. 3362 would reauthorize the Federal and State Technology (FAST) Partnership program to improve the competitiveness of small businesses in technological fields. A portion of the funds made available under the program would also be available to conduct outreach and provide technical assistance to increase the number of small businesses participating in the SBIR program. The bill would authorize the appropriation of $10 million for each of fiscal years 2009 through 2014 to implement the program. Based on historical spending patterns of SBA's other business assistance programs, CBO estimates that implementing this provision would cost $36 million over the 2009–2013 period, assuming appropriation of the specified amounts. (An additional $24 million would be spent after 2013.)

SBIR–STEM Workforce Development Program

The bill would establish a program to encourage small businesses that participate in the SBIR program to provide internships to college students who are pursuing studies in the fields of science, technology, engineering, and math. Participating businesses would be eligible for a bonus grant equal to 10 percent of their SBIR award, up to a maximum of $10,000 per year. S. 3362 would authorize the appropriation of $1 million per year in fiscal years 2010 through 2014 for this program. CBO estimates that implementing this provision would cost $3 million over the 2009–2013 period, assuming appropriation of the necessary amounts.

National Academy of Sciences Study

The bill would direct certain agencies participating in the SBIR program to enter into an agreement with the National Academy of Sciences (NAS) for the National Research Council to study how the SBIR program has stimulated innovation and used small businesses to meet federal research and development needs. Based on the results of the study, NAS also would develop recommendations for improving the SBIR program. Based on information from NAS, CBO estimates that conducting a study as required by S. 3362 would cost $4 million over the 2009–2013 period.

Additional agency activities

S. 3362 would require each agency participating in the SBIR or STTR program to develop a data system to collect and maintain information from applicants and businesses that receive awards under either program to assess the performance of the program. Information maintained in those systems would serve as a source for a public and a government database maintained by SBA to evaluate the performance of the SBIR and STTR programs. Based on information from the agencies, CBO estimates that developing new databases for each participating agency would cost about $6 million over the 2009–2013 period.

The bill also would require GAO to conduct two studies: One to determine whether the agencies participating in the SBIR and STTR programs are complying with the programs' requirements to allocate a specific portion of their R&D budgets, the other to assess whether agencies participating in the SBIR program are sufficiently protecting the intellectual property rights of the small businesses that receive awards under the program. CBO estimates that conducting such studies would cost about $1 million, subject to the availability of appropriated funds.

Intergovernmental and private-sector impact: S. 3362 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

Previous CBO estimate: On April 22, 2008, CBO transmitted a cost estimate for H.R. 5819, the SBIR/STTR Reauthorization Act, as reported by the House Committee on Small Business on April 18, 2008. The Senate legislation has several differences from the House legislation: It would reauthorize and expand the SBIR and STTR programs over a longer period of time; it would reauthorize the FAST program for six years rather than two as provided in H.R. 5819; and it would authorize several new studies. H.R. 5819, however, contains an authorization of appropriations for a commercialization program that is not included in S. 3362. CBO estimated that implementing the provisions of H.R. 5819 would cost $263 million over the 2009–2013 period.

Estimate prepared by: Federal Costs: Susan Willie. Impact on State, Local, and Tribal Governments: Elizabeth Cove. Impact on the Private Sector: Jacob Kuipers.

Estimate approved by: Peter H. Fontaine, Assistant Director for Budget Analysis.

VII. Evaluation of Regulatory Impact

In compliance with rule XXVI(11)(b) of the Standing Rules of the Senate, it is the opinion of the Committee that no significant additional regulatory impact will be incurred in carrying out the provisions of this legislation. There will be no additional impact on the personal privacy of companies or individuals who utilize the services provided.

VIII. Section-by-Section Analysis

Sec. 1. Short title

This section specifies the short title of the legislation as the "SBIR/STTR Reauthorization Act of 2008."

Sec. 2. Table of contents

This section provides the table of contents for the legislation.

Sec. 3. Definitions

This section re-states applicable definitions from the Small Business Act.

TITLE I—REAUTHORIZATION OF THE SBIR AND STTR PROGRAMS

Sec. 101. Extension of termination dates

This section extends the SBIR and STTR programs for 14 years, making the new sunset dates for the SBIR and STTR programs September 30, 2022, and September 20, 2023, respectively.

Sec. 102. Status of the SBA Office of Technology

This section requires the SBA to maintain an Office of Technology headed by an Assistant Administrator who will report directly to the Administrator. It also requires that the Office of Technology be independent from the Office of Government Contracting and that it be sufficiently staffed and funded to oversee the SBIR and STTR programs and to comply with statutory data collection, evaluation, and reporting requirements.

Sec. 103. SBIR cap increase

This section increases the SBIR allocation from 2.5 percent to 3.5 percent by increasing it 0.1 percent each year from fiscal year 2010 through 2019. The provision also requires the Department of Defense and the Department of Energy to direct these additional funds to further the technology readiness levels of SBIR projects, including conducting testing and evaluation, and not to be used for Phase I and Phase II awards. The section does not apply to the Department of Health and Human Services.

Sec. 104. STTR cap increase

This section increases the STTR allocation from 0.3 percent to 0.6 percent by increasing it by 0.1 percent every two years from fiscal year 2010 through 2014.

Sec. 105. SBIR and STTR award levels

This section increases the size of SBIR and STTR awards from $100,000 to $150,000 for Phase I and from $750,000 to $1 million for Phase II and requires the SBA to make triennial adjustments of the award sizes for inflation. The provision prohibits any agency from issuing an SBIR or STTR award if the size of the award exceeds the award guidelines established in this section by more than 50 percent. Finally, the provision requires federal agencies to maintain information on awards exceeding the award guidelines, including the award amount, a justification for exceeding the guidelines, the identity and location of the recipient, and whether or not the recipient firm has received venture capital investment and, if so, whether or not it is majority owned and controlled by multiple venture capital companies.

Sec. 106. Agency and program collaboration

The section allows SBIR and STTR applicants to receive awards for subsequent SBIR or STTR phases at another agency and also allows small business concerns which received SBIR or STTR awards to receive awards for subsequent phases in either the STTR or SBIR program, respectively.

Sec. 107. Elimination of Phase II invitations

This section requires that federal agencies conduct their solicitation of Phase II SBIR and STTR proposals without any invitation, pre-screening, pre-selection, or down-selection process between the first and second phase.

Sec. 108. Majority-venture investments in SBIR firms

This section allows the Department of Health and Human Services to apply for the authority to permit firms majority owned and controlled by multiple venture capital companies to compete for up to 18 percent of the agency's SBIR funds. All other qualifying federal agencies with an SBIR program may apply for the authority to permit firms majority owned and controlled by multiple venture capital companies to compete for up to eight percent of the agency's SBIR funds. The provision also requires the Administrator of the SBA to post and maintain a website providing a clear explanation of the SBIR program affiliation standards.

Sec. 109. SBIR and STTR special acquisition preference

This section codifies the language from the SBIR and STTR Policy Directives confirming the intent of Congress to establish a special acquisition preference for SBIR and STTR Phase III awards. The provision clarifies that preference for contracts concerning research developed with SBIR or STTR funds should go to the developers and holders of SBIR and STTR technologies to the greatest extent practicable.

Sec. 110. Collaborating with Federal laboratories and research and development centers

This section reduces the burden on cooperation between SBIR/STTR firms and federal laboratories by ensuring that such subcontracting is generally permitted without the requirement for a waiver. The provision also ensures that subcontracting to federal laboratories is not required of SBIR or STTR awardees. Finally, it clarifies that firms that have entered into a cooperative agreement with a federal laboratory are eligible to receive SBIR/STTR awards.

Sec. 111. Notice requirement

This section ensures that the SBA is notified any time the SBIR or STTR policy directives are challenged in court. It also requires the SBA to report to Congress on actions taken to enforce the SBIR and STTR policy directives.

TITLE II—OUTREACH AND COMMERCIALIZATION INITIATIVES

Sec. 201. Rural and state outreach

This provision reauthorizes the FAST program and the ROP through 2014, and increases the authorization for the ROP from $2

million to $5 million. The provision also includes language to encourage the establishment of initiatives to reach out to traditionally underutilized communities with the goal of increasing their participation in the SBIR and STTR programs.

This section also reduces the match requirement for FAST recipients in rural areas to 50 cents for each federal dollar. The provision also reduces the match requirement to 35 cents for a FAST recipient in a rural area which is also located in one of the 18 states receiving the fewest SBIR Phase I awards.

Sec. 202. SBIR-STEM Workforce Development Grant Pilot Program

This section establishes a five-year workforce development grant pilot program to match up innovative small businesses with college students studying science, technology, engineering, and math. The proposal would provide SBIR grantees with a 10 percent bonus grant, for either Phase I or Phase II SBIR grants, with a total maximum award of $10,000 per year for small businesses that provide opportunities to these students.

Sec. 203. Technical assistance for awardees

This section increases the amount of discretionary technical assistance that SBIR and STTR agencies can contract out to provide to awardees from $4,000 to $5,000 for Phase I awards and from $4,000 to $5,000 per year for Phase II awards. The provision also states that this amount shall be in addition to the amount of the recipient's award. It also requires agencies to provide SBIR and STTR award winners who wish to procure their own technical assistance with the allowable amount. Finally, the provision prohibits the agencies from using these funds to pay its contractor for technical assistance for a given SBIR or STTR award unless the contractor provides the technical assistance to that awardee.

Sec. 204. Commercialization Pilot Program: Department of Defense

This section extends reauthorizes the Commercialization Pilot Program (CPP) at the Department of Defense through 2014 and extends it to the department's STTR program. The provision authorizes the Secretary of Defense to establish goals for transitioning Phase I and Phase II technologies in subcontracting plans for contracts of $100 million or more. The provision also requires the Secretary of Defense to set a goal to increase the number of Phase II contracts that lead to technology transition into programs of record or fielded systems and to use incentives to encourage agency program managers and prime contractors to meet that goal. Finally, the provision includes reporting requirements on the status of projects funded through CPP.

Sec. 205. Commercialization pilot programs for civilian agencies

This section authorizes agencies other than the Department of Defense to create Innovation Development Transition Pilot Programs to support advanced development of small business technologies which are facing high manufacturing or regulatory costs. The provision authorizes these agencies to grant Phase II awards up to two times the regular size (up to $2 million). As a condition of awards, matching private or federal non-SBIR funds are required.

Sec. 206. Nanotechnology initiative

This section requires each agency with an SBIR or STTR program to encourage the submission of applications for support of nanotechnology related projects. The section sunsets in 2014.

Sec. 207. Accelerating cures

This section establishes an advisory board at the National Academy of Sciences consisting of the Directors of the NIH and its SBIR program, senior agency managers at the NIH, industry experts, and other program stakeholders to provide regular assessments of program management and effectiveness. Half of the board shall be SBIR awardees. This section also encourages the creation of a pilot program, not to exceed 1 percent of SBIR dollars at NIH, to support innovation in program management and to enhance the development of cures and treatments. It also encourages NIH to reduce the time period between Phase I and Phase II to no more than six months to the greatest extent practicable. Finally, the section requires the NIH director to submit an annual report to Congress and the aforementioned NAS advisory board on the activities of the SBIR program at the NIH. Five years after enactment this section will sunset.

TITLE III—OVERSIGHT AND EVALUATION

Sec. 301. Streamlining annual evaluation requirements

This section requires the Administration to report to Congress at least annually the number of proposals received from firms with venture capital investment, including those owned and controlled by multiple venture capital firms. It also requires the Administration to report on efforts to increase outreach to firms owned and controlled by women and minorities, the implementation and compliance with the allocation of funds for firms majority owned and controlled by multiple venture capital companies, and appeals of Phase III awards and notices of noncompliance with the SBIR and the STTR Policy Directives. Finally, the section requires the Administration to coordinate the implementation of electronic databases at the participating agencies.

Sec. 302. Data collection from agencies for SBIR

This section requires agencies with an SBIR program to collect data on whether or not an applicant or awardee has venture capital, if it is majority owned and controlled by multiple venture capital firms, the amount of venture capital it has received at the time of award, if it has foreign investors and who they are, if it is owned by a woman, if it is owned by a minority, if it received assistance from the FAST program or the ROP, and if it has a university affiliation. The provision also requires agencies to justify awards given that exceed the statuary guidelines.

Sec. 303. Data collection from agencies for STTR

This section requires agencies with an STTR program to collect data on whether or not an applicant or awardee has venture capital, if it is majority owned and controlled by multiple venture capital firms, the amount of venture capital it has received at the time of award, if it has foreign investors and who they are, if it is owned

by a woman, if it is owned by a minority, if it received assistance from the FAST program or the ROP, and if it has a university affiliation. The provision also requires agencies to justify awards given that exceed the statutory guidelines.

Sec. 304. Public database

This section requires that the public database maintained by the Administrator include information on whether or not a firm receiving an award has venture capital, is majority owned and controlled by multiple venture capital companies, is owned by a woman, is owned by a minority, has received assistance from the FAST program or the ROP, or has a university affiliation.

Sec. 305. Government database

This section requires that the government database maintained by the Administrator in coordination with the agencies for the purposes of evaluation of the SBIR and STTR programs include information on the ownership structure and affiliations of awardee firms that have venture capital and that are majority owned and controlled by multiple venture capital companies, whether or not a firm is owned by a woman, is owned by a minority, has received assistance from the FAST program or the ROP, or has a university affiliation.

Sec. 306. Accuracy in funding base calculations

This section requires the GAO to conduct an audit of the SBIR and STTR programs to determine whether federal agencies are complying with the allocation requirements. The provision also requires that the GAO assess whether or not it would be a more effective to base participation on a percentage of an agency's research and development budget rather than the extramural research and development budget and to report such information to Congress.

Sec. 307. Continued evaluation by the National Academy of Sciences

This section authorizes the National Academy of Sciences to continue its evaluation of the SBIR program through the end of fiscal year 2021 and requires that updates of the studies be provided to Congress every four years from the date of enactment.

Sec. 308. Technology insertion reporting requirements

This section requires the Administration to include in its annual report to Congress information on Phase III awards issued by SBIR and STTR agencies, including the dollar amount of these awards, their recipients, and the name of component or agency issuing them.

Sec. 309. Intellectual property protections

This section requires the GAO to conduct a study of the SBIR and STTR programs to assess whether the agencies are adhering to the data rights protections for SBIR and STTR awardees and their technologies, as well as whether the current laws and policy directives are sufficient to protect the rights of the awardees. The report is due to Congress 18 months after the enactment of the Act.

TITLE IV—POLICY DIRECTIVES

Sec. 401. Conforming amendments to the SBIR and the STTR Policy Directives

This section requires conforming amendments to the SBA SBIR and STTR Policy Directives within 180 days to implement the provisions of this Act. It also requires that the Administration publish the SBIR and STTR Policy Directives in the Code of Federal Regulations.

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