

U.S. Small Business Administration



**SMALL BUSINESS
INNOVATION
RESEARCH PROGRAM
(SBIR)**

ANNUAL REPORT – FY 2006

**Office of Technology
U.S. Small Business Administration**

Introduction

This is the 24th annual report on the Small Business Innovation Research SBIR program, which summarizes program activities and results for FY 2006. The Small Business Innovation Development Act of 1982, Public Law 97-219, as amended, directs the U.S. Small Business Administration (SBA) to establish policy for monitoring, evaluating, and reporting on accomplishments of the SBIR program.

Public Law 97-219 was signed on July 22, 1982, and is found in section 9 of the Small Business Act. Congress reauthorized the SBIR program in 1986, and again in 1993, extending it to October 1, 2000. This reauthorization also increased the percentage of research and development (R&D) funds that participating Federal agencies must direct to small businesses under the program from 2 percent to 2.5 percent. On December 21, 2000, Public Law 106-554 was signed, reauthorizing the SBIR program through September 30, 2008.

FY 2006 Summary

- In FY 2006, the 11 agencies participating in the SBIR program released a total of 19 Phase I solicitations. The Department of Defense and the Department of Health and Human Services released 3 solicitations; the Department of Commerce, the Department of Homeland Security, the Department of Education, and the National Science Foundation each released two solicitations; and the other five agencies released one each.
- Participating agencies received 24,305 Phase I proposals from small high-tech business concerns. Agencies subsequently made 3,836 Phase I awards, representing 15.8 percent of proposals received.
- A total of 3,267 Phase II proposals were received by participating agencies, resulting in 2,026 awards. These awards represented 62 percent of Phase II proposals received.
- In total, 27,572 Phase I and Phase II proposals were received in FY 2006.

Phase I and Phase II awards totaled 5,862, representing 21 percent of the total number of proposals received.

HUBZone Small Business Concerns

The Small Business Act requires the SBA to report on the participation of HUBZone small business concerns (SBCs) in the program. The participating agencies made 52 Phase I awards and 32 Phase II awards to HUBZone SBCs, for a total of 84 awards. Phase I awards totaled \$4.7 million, and awards for Phase II totaled \$21.7 million for a total of \$26.4 million to HUBZone SBCs.

Technology Resources Network

As defined in Section 9 of the Small Business Act, the SBA designed the Technology Resources Network (Tech-Net) which was implemented in part in 1998. Tech-Net streamlines and standardizes the reporting of SBIR awards and applicant information by the Federal agencies required to participate in the SBIR program. The SBA held several working sessions with the agencies to define the input data fields and a core set of output reports to facilitate the administration of the program. The SBA incorporated the unique needs of each agency into the design of the database system to ensure that the system would provide much needed award and applicant information. Information such as name, size, location, abstracts and identifying number of each SBC that has received a Phase I or Phase II award is available in this database. Agencies now have the ability to review awards and applicant information and edit previously reported data interactively. The public version of this database can be accessed by visiting the website: <http://tech-net.sba.gov>. The participating agencies are providing information needed in a timely manner to maintain the database.

The SBA is currently testing the Government database, which will maintain commercialization information on all Phase II projects funded under the SBIR program. This database will not be accessible by the

public; therefore, any confidential information that is provided by the SBIR Phase II awardees will not be disclosed to the public. A username and password will be required to access the database. The SBA will control the issuance of the username and passwords. The database is being designed to collect information that will allow the SBA, each participating agency, Government Accountability Office, the National Academy of Science and the Congress to more effectively measure the impact and success of the program.

In 2006, the Office of Management and Budget approved the SBA's survey form for SBIR program applicants, which requests information regarding the commercialization of work completed under past Phase II SBIR awards. The survey form is part of SBA's current enhancement of its Tech-Net data system.

Executive Order 13329

On February 24, 2004, the President signed Executive Order 13329, Encouraging Innovation in Manufacturing. The Executive Order states that continued technological innovation is critical to a strong manufacturing sector of the United States economy. The Executive Order recognizes that the commercialization of technologies, products, or services funded through the SBIR and STTR programs play a crucial role in stimulating the U.S economy. The Executive Order further acknowledges that the research and development work performed by small businesses participating in these two important programs have contributed to our National defense, improved our health and welfare, protected the environment, and improved our production processes. SBA is in the process of amending the SBIR Policy Directive to address the Executive Order. (See 70 Federal Register 28975 (May 19, 2005)).

During FY 2006, there were a total of 1,132 SBIR Phase I and Phase II awards that involved manufacturing topics. Those awards totaled \$351.9 million.

Compliance with Reporting of Follow-on Non-SBIR Awards

SBIR firms should be encouraged to develop and expand business applications of their SBIR research with the desired outcome of generating new employment and income. One purpose of follow-on funding agreements or Phase III is to commercialize the innovation and help the small business concern grow. Sections 4(c)(7) and 10(b)(13) of the Policy Directive require agencies to report only those instances where a follow-on award with non-SBIR funds was issued to a concern other than the SBIR awardee that developed the technology.

SBA works directly with the participating agencies and program awardees to resolve cases where a violation or misunderstanding of the program may have occurred. In such cases, SBA acts first to clarify the rules of the program and to help resolve misunderstandings that may reside on the part of the participating agency or the small business concern. If the issue is not resolved, SBA will submit a report to Congress. SBA is not reporting any such cases to Congress in this year's annual report.

Table 1: SBIR Program Data

Fiscal Year 2006 SBIR Agency Obligations Summary (dollars in thousands)

	DOA	DOC	DOD	DOE	DOT	ED	EPA	DHS	HHS	NASA	NSF	TOTAL
Agency Extramural Budget	779,192	253,569	45,436,990	4,171,810	150,000	323,000	398,600	1,406,787	23,274,591	4,200,000	3,618,132	84,012,671
Agency SBIR Budget	19,479	6,973	1,133,774	104,217	3,750	8,075	5,000	31,869	581,864	105,600	90,450	2,091,051
Dollars Obligated	16,904	7,078	1,159,194	103,762	3,754	8,675	6,479	29,869	583,988	103,828	90,450	2,113,981
Percent of SBIR to Extramural Budget	2.17%	2.79%	2.55%	2.49%	2.50%	2.69%	1.63%	2.12%	2.51%	2.47%	2.50%	2.52%
Deficit/Surplus	-2,575	105	25,420	-455	4	600	1,479	-2,000	2,124	-1,772	0	22,930

Fiscal Year 2006 Award Profile (dollars in thousands)

	DOA	DOC	DOD	DOE	DOT	ED	EPA	DHS	HHS	NASA	NSF	TOTAL
Total Phase I Awards	97	23	1,862	262	9	49	41	67	870	297	259	3,836
Minority/Disadvantaged Phase I Awards	10	2	145	31	0	8	4	5	60	40	33	338
Total Phase II Awards	32	18	1,172	123	4	8	15	28	407	143	76	2,026
Minority/Disadvantaged Phase II Awards	6	0	105	16	1	1	1	6	17	19	8	180
Total Phase I Dollars Awarded (\$)	7,627	2,037	166,008	26,548	892	4,634	2,860	7,059	147,077	20,675	25,768	411,185
Minority/Disadvantaged Phase I Dollars (\$)	788	150	13,162	3,088	0	732	280	499	8,726	2,786	3,293	33,504
Total Phase II Dollars Awarded (Obligations)	9,277	5,041	774,102	77,214	2,444	4,041	3,618	22,818	425,598	83,157	64,681	1,471,991
Minority/Disadvantaged Phase II Dollars (\$)	1,020	0	74,869	11,577	-720	500	225	5,245	18,401	11,358	3,916	127,831
Average Amount for Phase I Awards (\$)	79	89	89	101	99	95	70	105	169	70	99	107

Fiscal Year 2006 Agency Solicitation Profile

	DOA	DOC	DOD	DOE	DOT	ED	EPA	DHS	HHS	NASA	NSF	TOTAL
Number of Solicitations Released	1	2	3	1	1	2	1	2	3	1	2	19
Number of Research Topics in Solicitations	12	15	883	49	9	3	4	16	210	29	5	1,235
Number of Copies Distributed	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
Number of Phase I Proposals Received	653	205	13,253	1,312	89	199	422	348	3,996	2,208	1,620	24,305
Number of Phase II Proposals Received	61	35	1,532	226	4	28	28	34	899	280	140	3,267
Number of Phase I Awards	97	23	1,862	262	9	49	41	67	870	297	259	3,836
Number of Phase II Awards	32	18	1,172	123	4	8	15	28	407	143	76	2,026

Dollars obligated can include modifications to previous year's awards: DOD \$219,085K HHS \$11,313K, EPA 70K

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The number of awards for Phase I and Phase II usually increase each fiscal year; however, during FY 2006, the Phase I awards decreased. (Please see Table 2).

Table 2: Number of SBIR Awards -- FY 1983 through FY 2006

Fiscal Year	Phase I	Phase II	Totals
83	686	-	686
84	999	338	1,337
85	1,397	407	1,804
86	1,945	564	2,509
87	2,189	768	2,957
88	2,013	711	2,724
89	2,137	749	2,886
90	2,346	837	3,183
91	2,553	788	3,341
92	2,559	916	3,475
93	2,898	1,141	4,039
94	3,102	928	4,030
95	3,085	1,263	4,348
96	2,841	1,191	4,032
97	3,371	1,404	4,775
98	3,022	1,320	4,342
99	3,334	1,256	4,590
00	3,166	1,330	4,496
01	3,215	1,533	4,748
02	4,243	1,577	5,820
03	4,465	1,759	6,224
04	4,638	2,013	6,651
05	4,300	1,871	6,171
06	3,835	2,026	5,861
Total	68,339	26,690	95,029

- During FY 2006, participating agencies awarded over \$2.1 billion through the SBIR program.
- FY 2006 Phase I awards totaled over \$411 million.
- Phase II awards aggregating over \$1.4 billion were made in FY 2006.
- In FY 2006, minority/disadvantaged-owned firms received 518 awards totaling over \$161 million.

Overall, there have been parallel long-term upward trends in the dollar amount of Phase I and Phase II totals. (Please see Table 3).

Table 3: Value of SBIR Awards-- FY 1983 through FY 2006 (in millions of dollars)

Fiscal Year	Phase I	Phase II	Totals
83	\$ 44.5	\$	\$ 44.5
84	48.0	60.4	108.4
85	69.1	130.0	199.1
86	98.5	199.4	297.9
87	109.6	240.9	350.5
88	101.9	248.9	389.1
89	107.7	321.7	431.9
90	118.1	341.8	460.7
91	127.9	335.9	483.1
92	127.9	371.2	508.4
93	154.0	490.7	698.0
94	220.4	473.6	717.6
95	232.2	601.9	834.5
96	228.9	645.8	916.3
97	277.6	789.1	1,106.9
98	262.3	804.4	1,066.7
99	299.5	797.0	1,096.5
00	302.0	888.2	1,190.2
01	317.0	977.3	1,294.3
02	411.4	1,023.3	1,434.7
03	455.3	1,215.0	1,670.3
04	498.8	1,368.8	1,867.6
05	461.2	1,404.7	1,865.9
06	411.1	1,471.9	1,883.0
*Total	5,479.9	15,201.9	20,681.8

Total does not include award modifications

Through its SBIR Policy Directive, the SBA requires each participating agency to list the number of Phase I awards made both within 6 months and after 6 months of the closing date of its solicitation announcement. Table 4 provides this information for FY 2006.

Table 4: FY 2006-- Phase I TimeFrame

Agency	Total FY 06 Phase I Awards	No. within 6 Months of Solicitation Close	No. More Than 6 Months After Solicitation Close
DOA	97	0	91
DOC	23	23	0
DOD	1,862	1,672	190
DOE	262	262	0
DOT	9	9	0
ED	49	37	12
EPA	41	41	0
DHS	66	67	0
HHS	870	868	2
NASA	297	297	0
NSF	259	259	0
TOTAL	3,836	3,302	998

Extramural Budget Calculation

Public Law 106-554 directs each Federal agency with an SBIR program to provide SBA with an annual report that includes a description of the methodology used for calculating the amount of the extramural budget of the Federal agency. (see Table 5.)

To monitor and report on the participating agencies' SBIR programs, the SBA has established a reporting base to compare against each agency's budget data. To determine extramural obligations as a base for the size of each agency's SBIR program, the Small Business Act provides a definition of R&D.

It should be noted that a 3-year budget cycle is used for establishing extramural R/R&D obligations. Within any given year, a participating agency's initial estimate can change due to congressional action on that agency's R/R&D budget. To ensure proper implementation of the program, each agency will establish an estimated budget as a basis for operations during the year.

The SBA's Chief Financial Officer's office has reviewed the methodology used in calculating each participating agency's extramural budget. The results of that review are in Table 5.

**Table 5: CALCULATION OF EXTRAMURAL BUDGET
(\$ In Thousands)**

Agency Name	FY 2006 R&D Budget	Intramural Budget & Other	Extramural Budget	\$SBIR	Overall Compliance
DOD - Dept. of Air Force	\$ 21,999,649	\$ 9,478,029	\$12,521,620	\$ 313,041	Yes
DOD - Dept. of Army	11,172,397	1,438,134	9,734,263	243,357	Yes
DOD - Defense Health Program	571,709	5,423	566,286	14,157	Yes
DOD - US Special Operations Command	628,822	63,520	565,302	14,133	Yes
DOD Defense Missile Defense Agency (MDA)	7,802,247	3,048,513	4,753,734	118,843	Yes
DOD-CBD	1,089,643	681,116	408,527	10,213	Yes
DOD-OSD	2,069,781	513,033	1,556,748	38,919	Yes
DOD - Defense Adv. Research Project Agency	3,083,752	402,997	2,680,755	67,019	Yes
DOD - Defense Threat Reduction Agency	423,178	159,014	264,164	6,604	Yes
DOD - Dept. of Navy	19,289,133	6,902,542	12,386,591	309,665	Yes
Dept. of Energy	4,247,543	75,733	4,171,810	104,295	Yes
Dept of HHS	23,274,391	N/A	23,274,391	581,859	Yes
DOC - Nat'l Institute of Standards & Technology	383,256	307,516	78,203	1,955	Yes
DOC - Nat'l Oceanic & Atmospheric Administration	526,900	288,800	238,100	5,953	Yes
Nat'l Science Foundation	3,618,132	-0-	3,618,132	90,453	Yes
Dept. of Transportation (Combined)	892,313	263,350	150,000	3,750	Yes
Dept. of Education	323,000	N/A	323,000	8,075	Yes
EPA	591,706,700	398,598,700	193,108,000	4,827,700	Yes
NASA	7,101,400	N/A	5,000,300	125,008	Yes
Dept. of Agriculture	2,169,000	1,389,808	779,192	19,480	Yes
Dept. of Homeland Security (DHS)	1,406,787			31,868	Yes