Opportunities for R&D Partnerships

- Small Business Innovation Research (SBIR)
- Small Business Technology Transfer (STTR)

Venture Capital Technology Showcase
Washington, D.C.
August 21& 22, 2007

Larry S. James, Acting Director
Small Business Research Division
301-903-7481

SBIR Program

Small Business Innovation Development Act of 1982

Congress established four major goals

- Stimulate technological innovation
- Use small business to meet federal R&D needs
- Foster and encourage participation by minorities and disadvantaged persons in technological innovation
- Increase private-sector commercialization innovations derived from federal R&D

STTR Program

Small Business Research and Development Enhancement Act of 1992

- Stimulate and foster scientific and technological innovation through cooperative research and development carried out between small business concerns and research institutions

- Foster technology transfer between small business concerns and research institutions

Program Descriptions

- Small Business Innovation Research (SBIR) – 2.5%
  - Set-aside program for small business concerns to engage in federal R&D – with potential for commercialization

- Small Business Technology Transfer (STTR) – 0.30%
  - Set-aside program to facilitate cooperative R&D between small business concerns and U.S. research institutions – with potential for commercialization

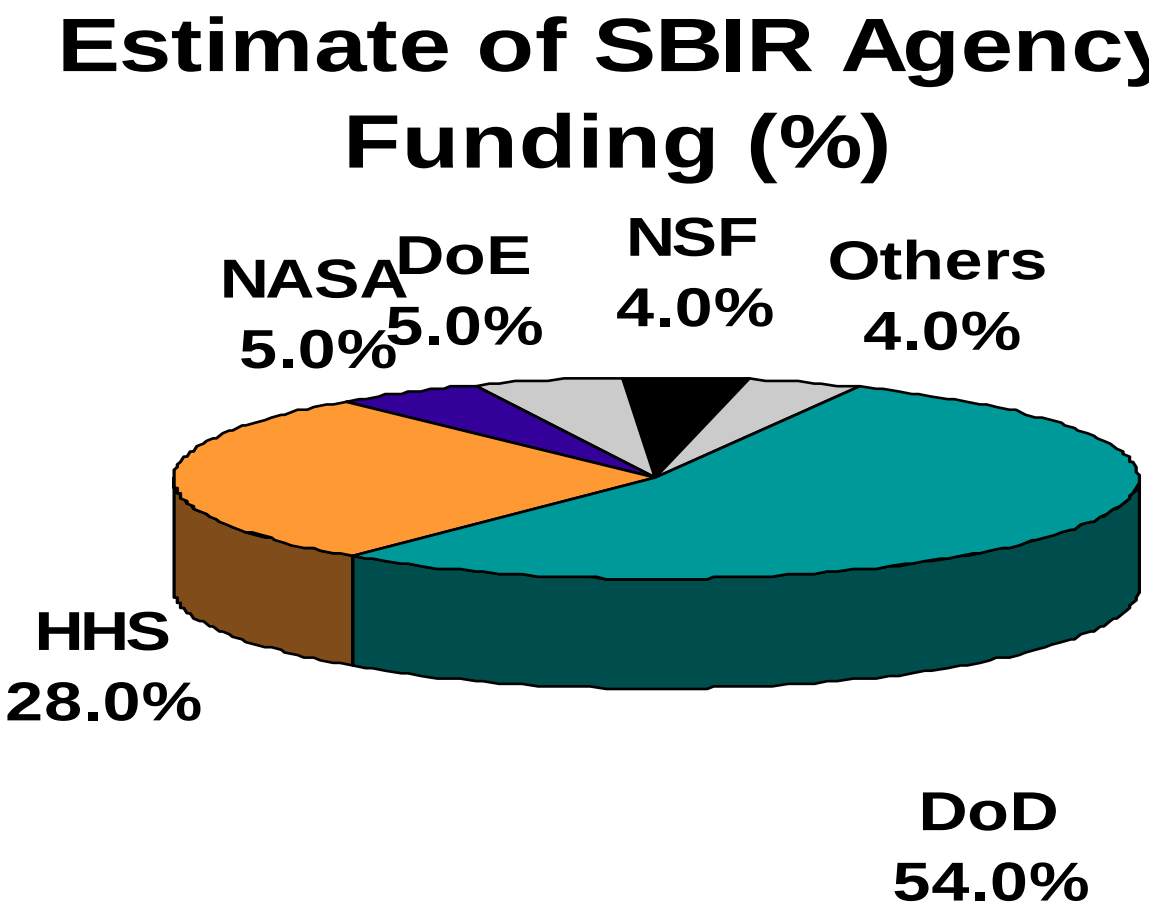
SBIR / STTR Participating Agencies

TOTAL ~ $2.3 + B

FY 2007

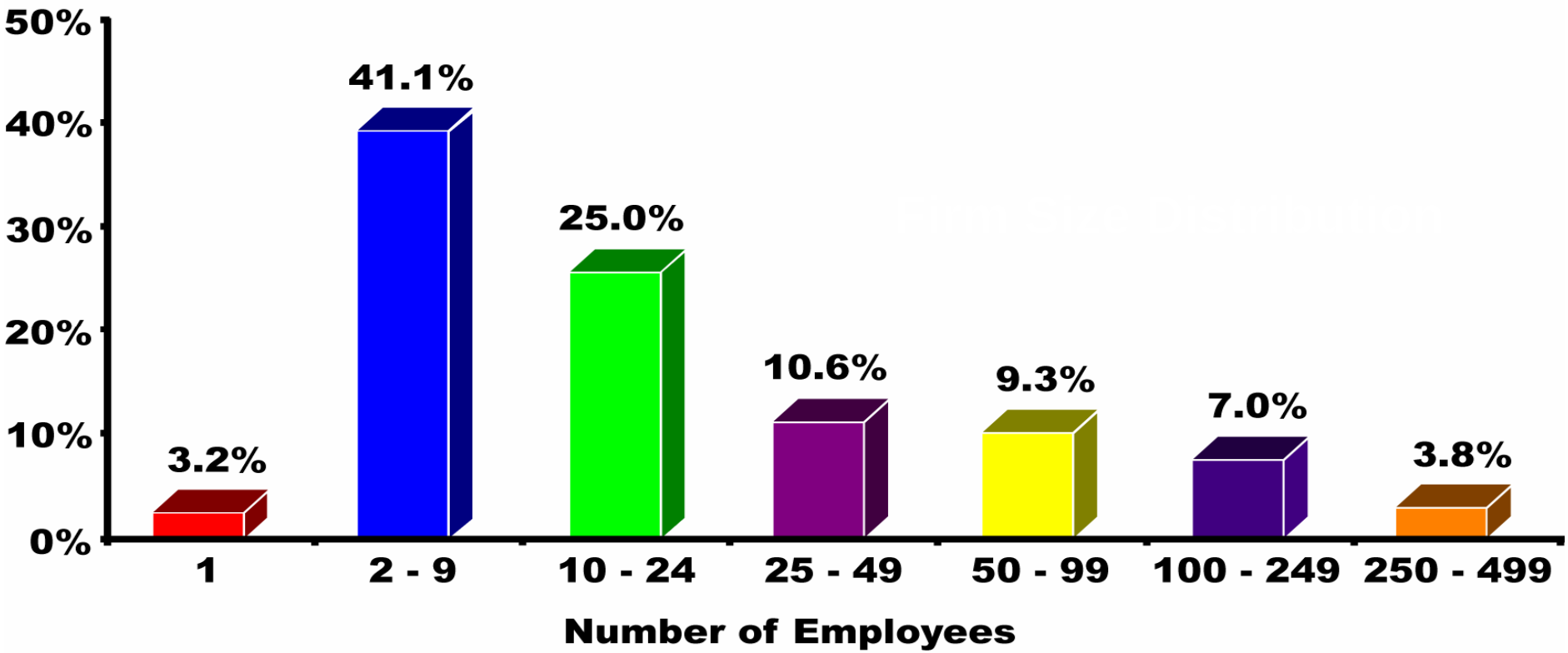
DOD	**SBIR/STTR**
HHS	**SBIR/STTR**
DOE	**SBIR/STTR**
NASA	**SBIR/STTR**
NSF	**SBIR/STTR**
DHS	**SBIR**
USDA	**SBIR**
DOC	**SBIR**
ED	**SBIR**
EPA	**SBIR**
DOT	**SBIR**

SBIR Funding Allocation
Across Federal Government



Who Participates in SBIR?

- ✓ Firms are typically small and new to the program.
- ✓ About 1/3 are first-time Phase I awardees.
- ✓ Small hi-tech firms from across the country.



Standard Phase I Process

- Agencies describe R&D topics in solicitations.
- Small Business Concerns prepare short (usually 25-page)proposals. Unsolicited proposals not accepted.
- Agencies evaluate based on technical merit, firm's qualifications, and commercial potential/societal benefit.
- Agencies make Phase I awards.

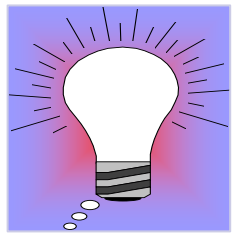
Evaluation Criteria

- Scientific and Technical Merit
- Qualifications of PI/other key personnel
- Soundness of Work Plan
- Commercial Potential

SBIR/STTR: 3-Phase Program

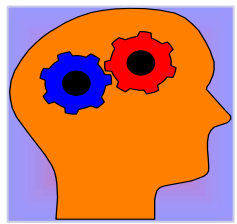
PHASE I

- Feasibility Study
- $100K and 6-12 month award (SBIR/STTR)



PHASE II

- Full Research/R&D
- $750K and 2-year Award (SBIR/STTR)



PHASE III

- Commercialization Stage
- Use of non-SBIR/STTR Funds

DOE PROGRAM FEATURES

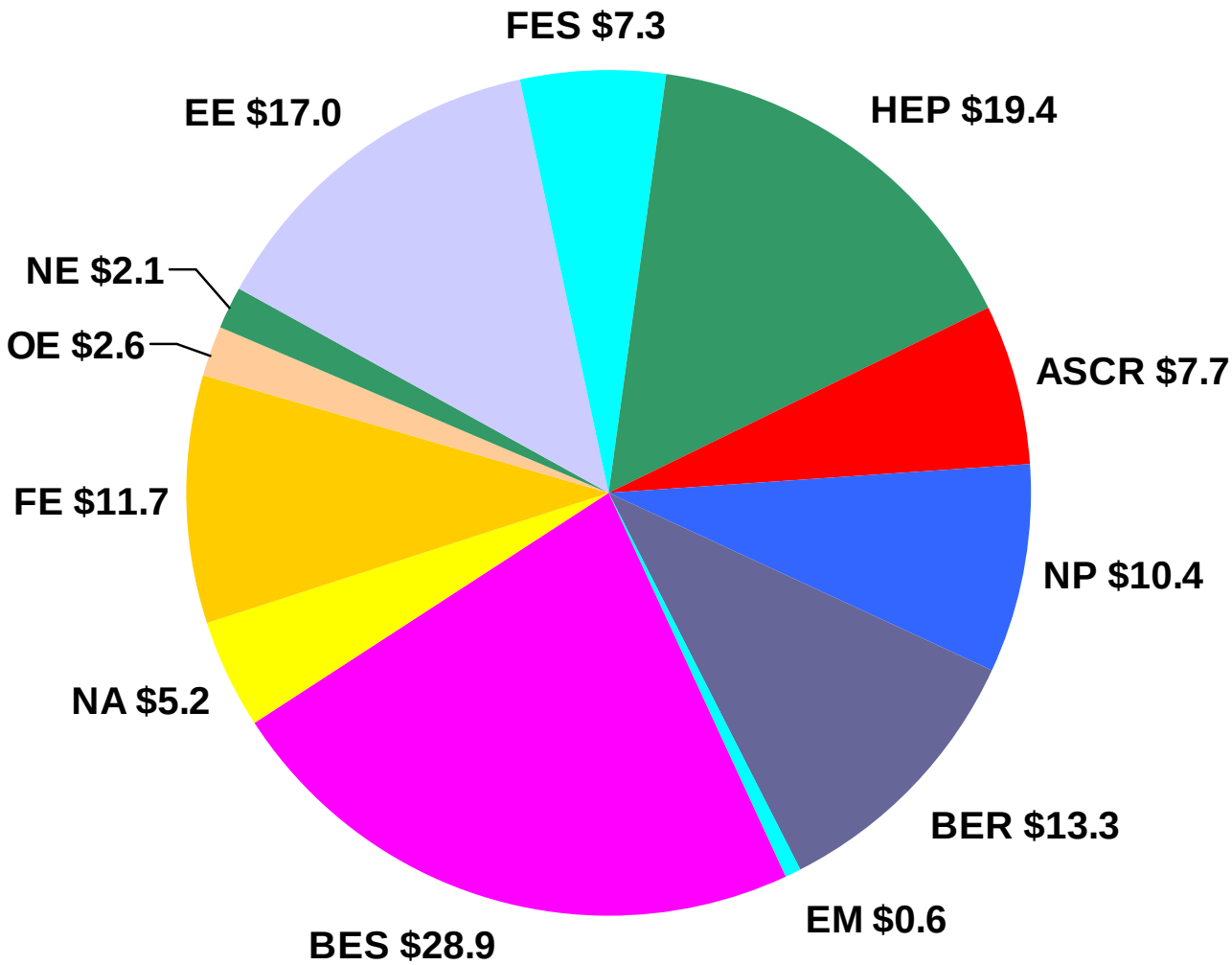
- GRANTS
- Annual Solicitation (Fall)
- $100K Phase I (9 months)
- $750K Phase II (24 months)
- Electronic applications only (Grants.gov)
- Must be awarded Phase I from DOE to compete in Phase II
- SBIR: PI must be employed by small business
- STTR: PI may be employed by either small business or research partner
- Commercialization assistance programs

Participating Research Programs

(FY07 dollars in millions)

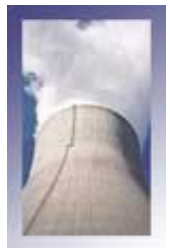
- Office of Science
  - Biological and Environmental Research ($13.3)
  - Basic Energy Sciences ($28.9)
  - Fusion Energy Sciences ($7.3)
  - High Energy Physics ($19.4)
  - Advanced Scientific Computing Research ($7.7)
  - Nuclear Physics ($10.4)
- Nuclear Energy ($2.2)
- Defense Nuclear Nonproliferation ($5.2)
- Electricity Delivery and Energy Reliability ($2.6)
- Environmental Management ($0.6)
- Fossil Energy ($11.7)
- Energy Efficiency and Renewable Energy ($17.0)

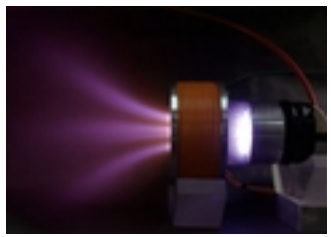
FY 2007 SBIR/STTR
Program Area Contributions
($ in millions)

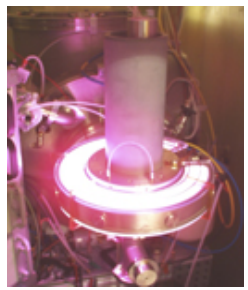


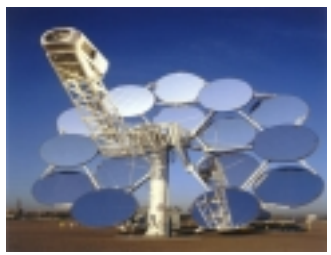
FY 2007 SBIR/STTR TECHNICAL TOPIC CATEGORIES

Energy Efficiency & Renewable Energy	12
Basic Energy Sciences	3
Fossil Energy	7
Fusion Energy	3
Biological Research	2
Environmental Research	3
Nuclear Energy	2
Data Management and Communication	9
High Energy and Nuclear Physics	8
Electricity Delivery/Reliability	3
National Security	2
Total Topics	54



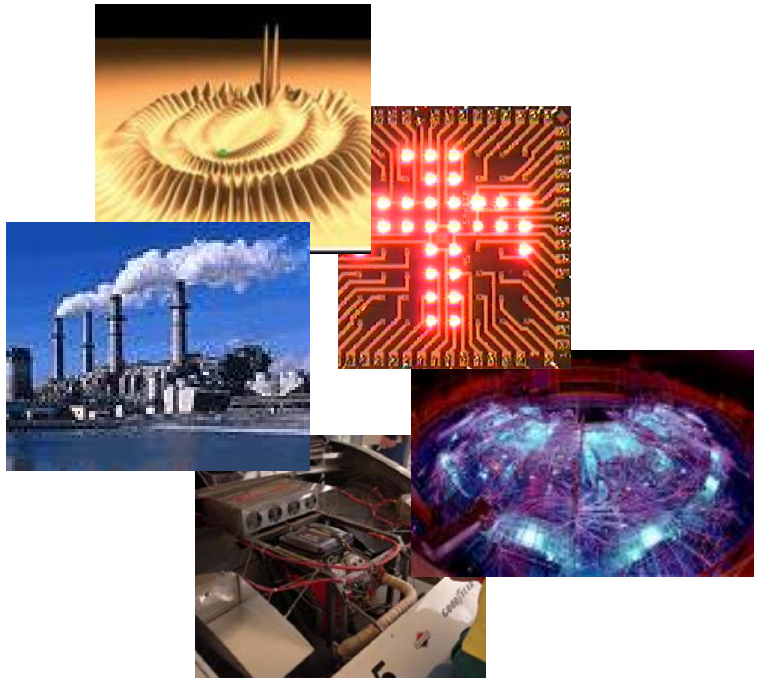


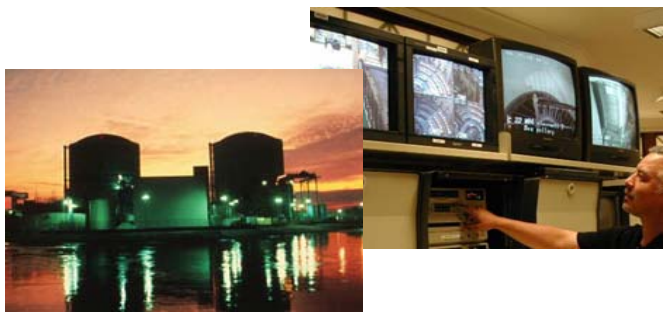




Topic Examples

- Nanotechnology Applications for Energy Efficiency and Renewable Energy
- Hydrogen Production and Delivery
- Technologies Related to Hybrid Electric Vehicles with Special Emphasis on Plug-in Hybrids
- Technology to Support National Scientific User Facilities
- Research to Support Proliferation Detection
- Materials for Advanced Nuclear Energy Systems





- Advanced Technologies and Materials for Fusion Energy Systems
- High Energy Physics Data Acquisition and Processing
- Nuclear Particle Physics and Radiation Detection Systems, Instrumentation and Techniques
- Power Electronics and Advanced Materials for Energy Storage

Grant Application Evaluation Process

- First Step Review
  (Phase I applications only)
- External Peer Review
  - Scientific/Technical Approach
  - Ability to Carry Out the Project
  - Potential Impact
- Scoring/Ranking
- Award Selection

REASONS FOR FIRST STEP DECLINATIONS

- Is the application responsive to the technical topic and subtopic?
- Is it for research or research and development?
- Does the application duplicate work that has already been funded?
- Does the application provide enough information to conduct further review?
- Is their a conflict of interest with respect to topic preparation?
- Does this application stand a reasonable chance of being funded compared to other applications received in the same topic/subtopic?

DOE SBIR/STTR EVALUATION CRITERIA Phases I and II

1. **Strength of the Scientific/Technical Approach**
   To what extent does the proposed work build upon or move beyond the current state-of-the-art? How new or unique is the idea? How significant is the scientific and/or technical challenge? Is a breakthrough possible? Has the applicant demonstrated knowledge of the subject? How thoroughly have the concepts been presented?

2. **Ability to Carry out the Project in a Cost Effective Manner**
   Please comment on the qualifications of the Principal Investigator (PI), other key staff, and consultants, if any, and on the level of adequacy of equipment and facilities

3. **Impact**
   Please comment on the significance of the technical and/or economic benefits of the proposed work, if successful. Please comment on the likelihood that the proposed work could lead to a marketable product or process, and on the size of the potential market. Please comment on the likelihood that the project will attract further development funding (from private sector sources or from Federal, non-SBIR/STTR sources) after the SBIR/STTR project expires.

Evidence of Commercial Potential (Phase II Only)

FY 2007 RESULTS

Phase I

- **1318 Phase I Applications Received**
- **1080 Applications Sent Out for Review**
- **318 Selected for Award (279 SBIR, 39 STTR)**

SBIR – 46 collaborations; 36 universities, 10 DOE labs
STTR – 39 collaborations; 26 universities, 12 DOE labs, 1 other

Phase II

- **267 Phase II Applications Received**
- **193 Phase II Applications in Funding Range**
- **128 Selected for Award (113 SBIR, 15 STTR)**

SBIR – 11 collaborations; 6 universities, 4 DOE labs, 1 other
STTR – 15 collaborations; 10 universities, 5 DOE labs

OVERALL SUCCESS RATES
(Award to Submission Ratio)

	SBIR	STTR
Phase I	1 out of 6	1 out of 9
Phase II	1 out of 2	1 out of 2

FY 2007 Phase I

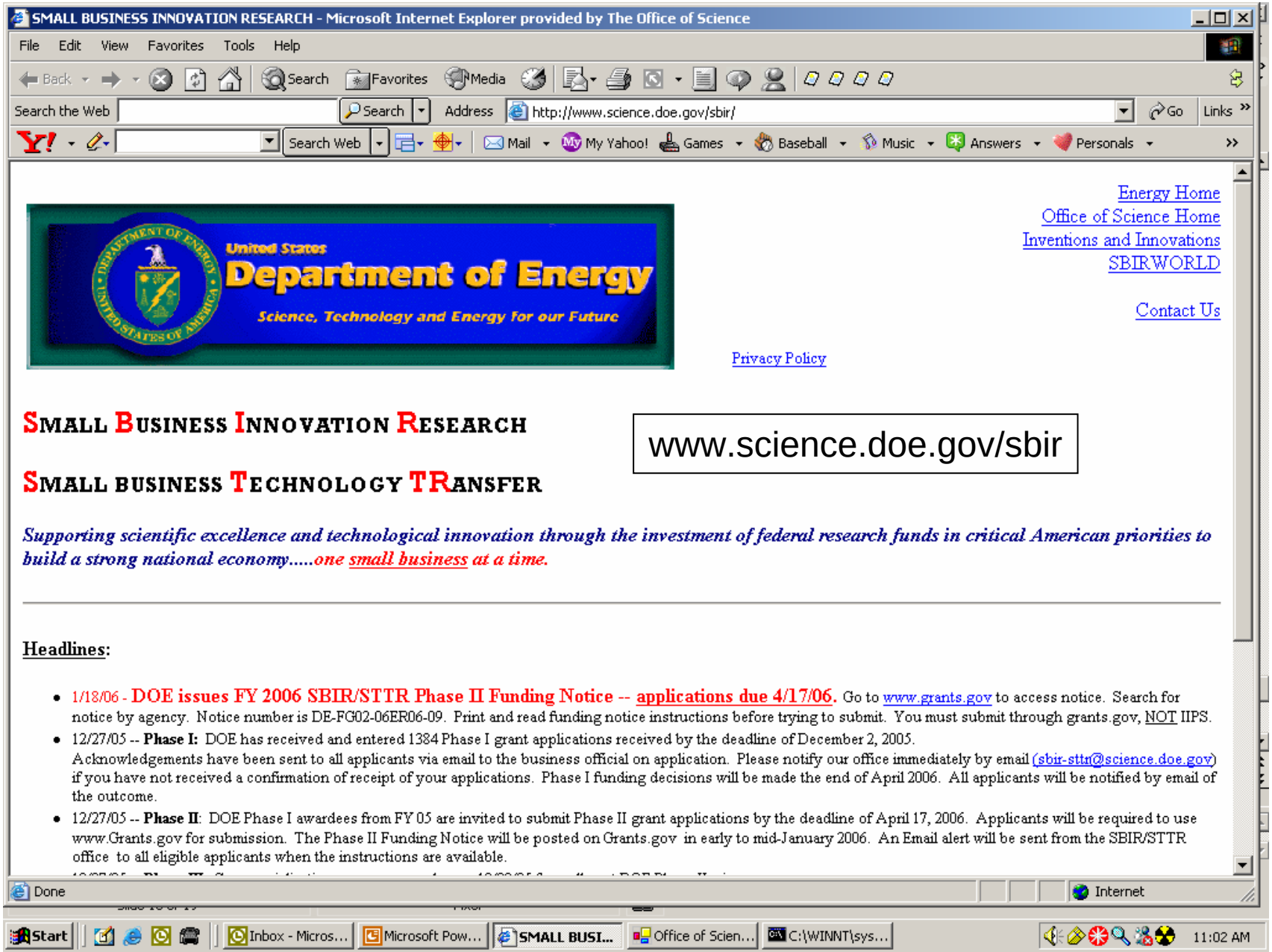
- 318 awards to 220 companies. Of those, 83 were first time winners with DOE.
- 49 of the 83 first time winners were first time applicants to DOE.

Outcomes

SBIR/STTR Program

Twenty-Four Year History

- $1.5 Billion in Awards
- 1,191 Projects Having Sales or Further Development
- $1.64 Billion in Total Sales
  - $1.4 Billion Non-Federal
  - $240 Million Federal
- $1.34 Billion in Phase III Development
  - $900 Million Non-Federal
  - $440 Million Federal


SMALL BUSINESS INNOVATION RESEARCH - Microsoft Internet Explorer provided by The Office of Science
File Edit View Favorites Tools Help
Back Search Favorites Media
Search the Web Search Address http://www.science.doe.gov/sbir/ Go Links
Search Web Mail My Yahoo! Games Baseball Music Answers Personals
United States Department of Energy
Science, Technology and Energy for our Future
Energy Home
Office of Science Home
Inventions and Innovations
SBIRWORLD
Contact Us
Privacy Policy
SMALL BUSINESS INNOVATION RESEARCH
SMALL BUSINESS TECHNOLOGY TRANSFER
www.science.doe.gov/sbir
Supporting scientific excellence and technological innovation through the investment of federal research funds in critical American priorities to build a strong national economy.....one small business at a time.
Headlines:
1/18/06 - DOE issues FY 2006 SBIR/STTR Phase II Funding Notice -- applications due 4/17/06. Go to www.grants.gov to access notice. Search for notice by agency. Notice number is DE-FG02-06ER06-09. Print and read funding notice instructions before trying to submit. You must submit through grants.gov, NOT IIPS.
12/27/05 -- Phase I: DOE has received and entered 1384 Phase I grant applications received by the deadline of December 2, 2005. Acknowledgements have been sent to all applicants via email to the business official on application. Please notify our office immediately by email (sbir-sttr@science.doe.gov) if you have not received a confirmation of receipt of your applications. Phase I funding decisions will be made the end of April 2006. All applicants will be notified by email of the outcome.
12/27/05 -- Phase II: DOE Phase I awardees from FY 05 are invited to submit Phase II grant applications by the deadline of April 17, 2006. Applicants will be required to use www.Grants.gov for submission. The Phase II Funding Notice will be posted on Grants.gov in early to mid-January 2006. An Email alert will be sent from the SBIR/STTR office to all eligible applicants when the instructions are available.
Done
Internet
Start
Inbox - Micros...
Microsoft Pow...
SMALL BUSI...
Office of Scien...
C:\WINNT\sys...
11:02 AM

Phase I/II Opportunities - Microsoft Internet Explorer provided by The Office of Science

File Edit View Favorites Tools Help

Back Search Favorites Media

Search the Web Search Address http://www.science.doe.gov/sbir/newweb/PhaseIOpportunities.htm Go Links

DOE Seal Search Web Mail My Yahoo! Games Baseball Music Answers Personals

Phase I and II Funding Opportunities....

- Open Notices
  FY06 SBIR/STTR Phase II Funding Notice -- opened January 18, 2006 (deadline for applications 4/17/06)

- Closed Notices
  FY 06 Phase I Funding Notice -- closed 12/2/05
  FY 05 Phase I Solicitation -- closed 12/13/04
  FY 05 Phase II Solicitation -- closed 4/13/05

- Upcoming Notices
  Phase I
  FY 07 Phase I Funding Notice -- opening in the Fall 2006

Done Internet

Start Sen... Unti... Offi... C:\... 05.... 11.... SBI... STT... Pha... RE: ... Den... 9:35 AM

DOE SBIR & STTR PROGRAM CONTACT INFORMATION

Web page: www.science.doe.gov/sbir
Email: sbir-sttr@science.doe.gov
Phone: 301-903-1414
Fax: 301-903-5488