



Pacific Northwest National Laboratory

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Current Events in SBIR / STTR

Disclaimer

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**Rick Shindell
SBIR Gateway
Zyn Systems**

What is SBIR?

Small Business Innovation Research

**The Nation's Largest Source of
Early Stage / High Risk Funding**

SBIR – Plain Speak

A Program to allow Small Businesses to participate in federal government funded Research and Development.

This is accomplished by setting aside 2.5% of an agency's extramural R&D budget (>\$2 billion), for Small Business Innovation Research.

The goals are to promote innovation, address government needs, stimulate the economy by commercializing technologies and/or transitioning the outcome back to the government (i.e. DoD war fighter)

SBIR Program Points

>\$2 Billion Awarded Annually

About 1/3 are *First Time Winners*

Majority of awards go to firms with 25 or fewer employees

Diverse topics to meet the needs of 11 agencies

Participating 11 SBIR Agencies

Dept. of Agriculture:

[USDA SBIR Home Page](#)

Dept. of Commerce:

[DOC-NOAA SBIR Page](#)

[DOC-NIST Home Page](#)

Dept. of Defense:

[DOD SBIR Home Page](#)

[Air Force SBIR/STTR](#)

[Army SBIR/STTR](#)

[DARPA SBIR Program Home Page](#)

[DTIC-Defense Technical Information Center](#)

[MDA SBIR Program Home Page](#)

[DTRA-Defense Threat Reduction Agency](#)

[Navy SBIR/STTR](#)

[NGA-National Geospatial Intelligence Agency](#)

[SOCOM-Special Operations Command](#)

Dept. of Education:

[ED IES](#)

[ED OSERS / NIDDR](#)

Dept. of Energy:

[DOE SBIR Home Page](#)

Department of Health & Human Services

[NIH SBIR Home Page](#)

Department of Homeland Security

[DHS Advanced Research Project Agency](#)

Dept. of Transportation:

[DOT SBIR Home Page](#)

Environmental Protection Agency:

[EPA SBIR Home Page](#)

National Aeronautics & Space Administration:

[NASA SBIR Home Page](#)

National Science Foundation:

[NSF SBIR Home Page](#)

Small Business Administration:

[SBA SBIR Home Page](#)

SBIR Funding

Total SBIR-STTR funding to date 1983-2007 (October 2007)

\$22,867,709,059

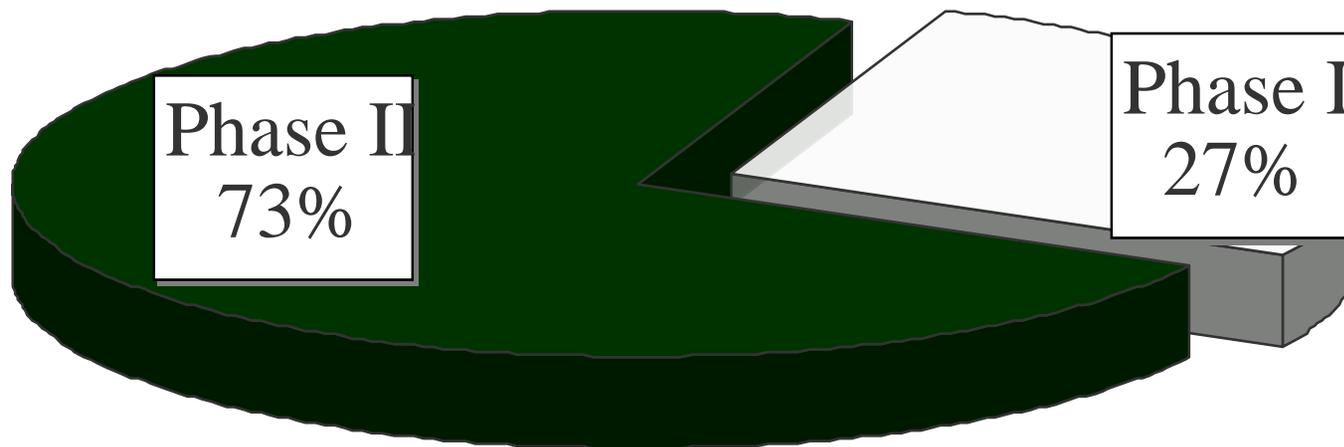


Figure 1. Percentage of Scientists and Engineers Employed In Government, Academia and Business (NSF 2003)

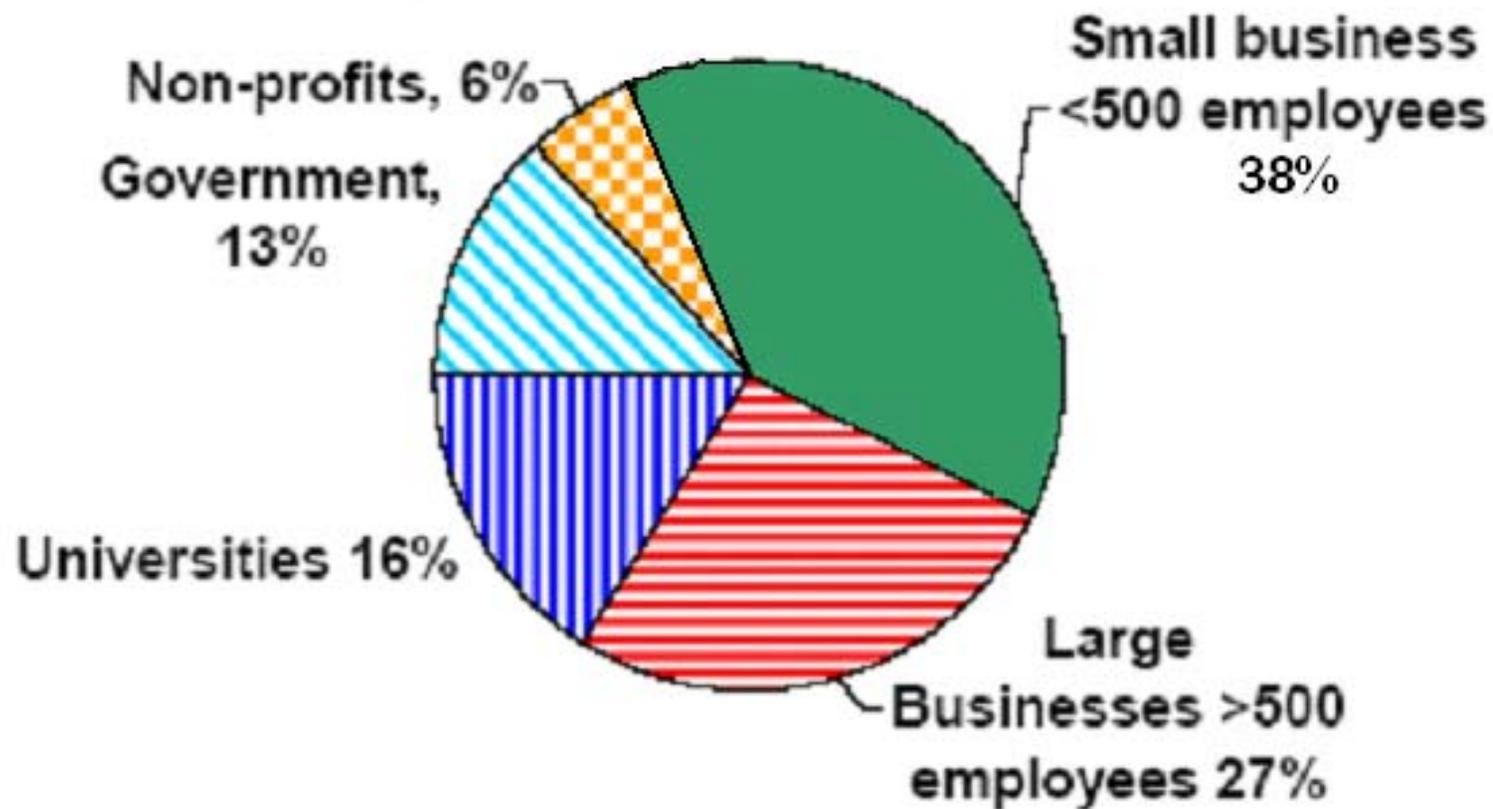
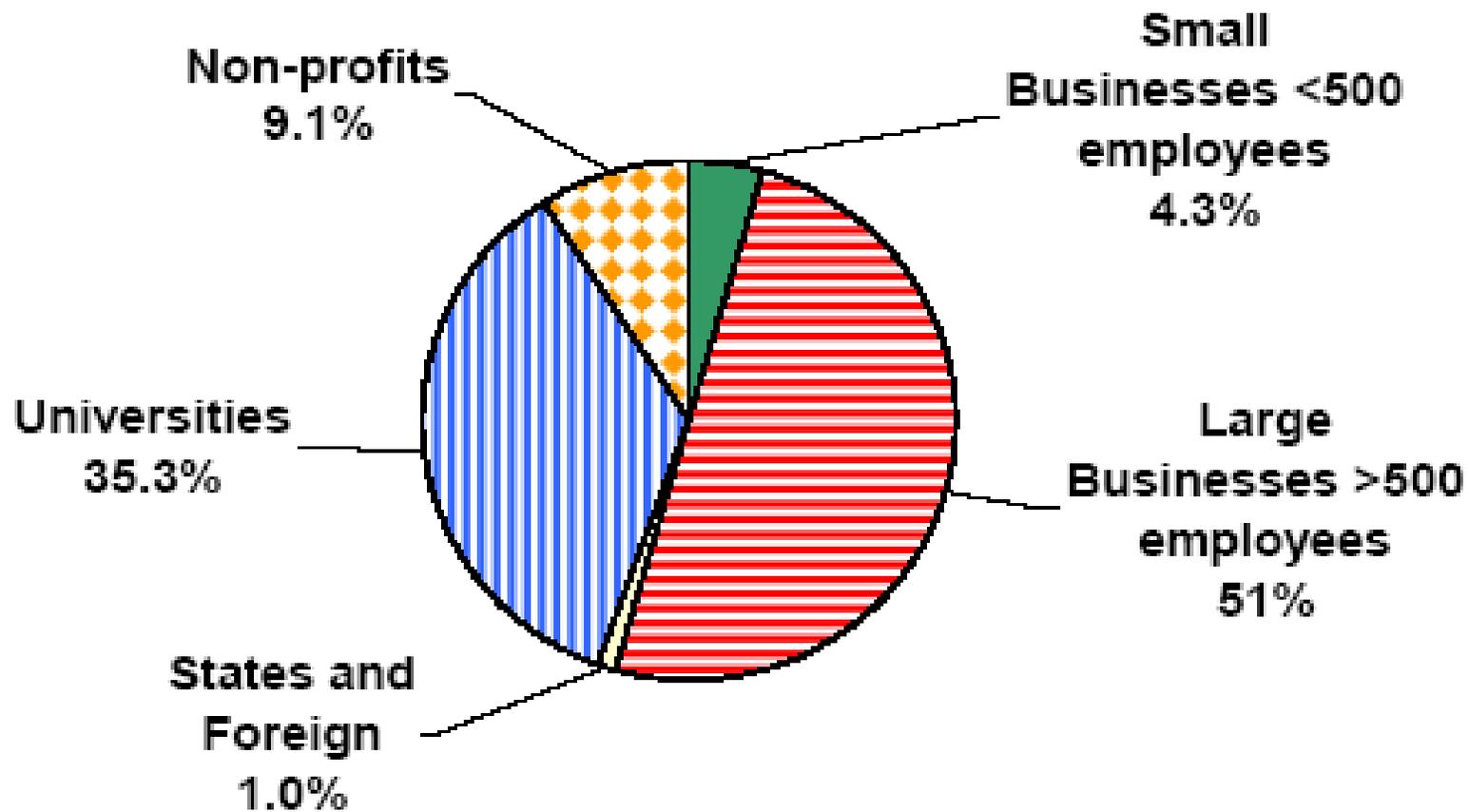


Figure 2. Percentage of Total Extramural Federal R&D Expenditures Received by Academia and Businesses \$81.7 Billion (NSF FY-2005)



SBIR Involved Firms

Firms Gone Public	597
Patents Issued	57,000
Mergers and Acquisitions	914

SBIR Eligibility

- ✓ **Organized for-profit U.S. business**
- ✓ **At least 51% U.S.- owned by individuals and independently operated or it must be a for-profit business concern that is at least 51% owned and controlled by another (one) for-profit business concern that is at least 51% owned and controlled by one or more individuals**
- ✓ **500 or fewer employees/affiliates**

SBIR Obstacles – Too Complicated...

Perhaps at first.....

Biggest obstacle: The Unknown.....

Lets look at describing the procedure for driving a stick shift automobile.

Anatomy of an SBIR Success

Enhanced Propeller Visibility

Navy SBIR - Topic N01-158

May 1, 2001

Naval Air Systems Command (NAVAIR)

N01-158 TITLE: Enhanced Propeller Visibility

TECHNOLOGY AREAS: Air Platform

DOD ACQUISITION PROGRAM SUPPORTING THIS TOPIC: ACAT IC: PEO-T, Tactical Aircraft Programs

OBJECTIVE: Develop a method for insuring all light condition visibility/awareness of aircraft propellers to insure aircrew safety.

DESCRIPTION: The E-2C and C-2A are the only remaining two propeller driven aircraft deployed on U.S. Navy aircraft carriers. High tempo 24 hour day and night flight operations demand that good safety procedures be adhered to and followed by all aircraft carrier personnel. The E-2C program desires to enhance carrier personnel safety by providing innovative aids that increase personnel awareness of rotating propellers/rotors at night and in low visibility conditions. The goal is to reduce the risk of carrier personnel being inadvertently struck by rotating propellers or rotors. The aids should make use of but are not limited to advanced computer hardware and software, lightning, paint and sound technologies. The approach may be one or a combination of technologies. The approach should consider keeping weight and power requirements to a minimum and satisfy the carrier E3 environment requirements if applicable. The approach should be easily incorporated on ship, aircraft or personnel as required. The goal is to implement this technology into carrier flight operations/procedures in two years or less.

PHASE I: Provide a design concept, including theoretical performance specifications in all weather/light conditions, which would be prototyped and demonstrated during Phase II.

PHASE II: Finalize the design and fabricate a functional prototype that may be demonstrated on a selected propeller driven aircraft. Performance tests addressing the specifications reported in Phase I should be conducted.

PHASE III: Improve functional prototype demonstrated in Phase II to a reliable airworthy maintainable component and/or system. Ensure that the technology produced during Phase II can be effectively produced and incorporated efficiently into propeller driven aircraft and helicopters.

Anatomy of an SBIR Success

Navy Topic 01-158 Phase I Award Winners Enhanced Propeller Visibility

CREARE, INC.

P.O. Box 71
Hanover, NH 03755

Phone: (603) 643-3800

PI: Dr. Joel L. Berg

Topic#: NAVY 01-158 **Awarded:** 06DEC01

Title: A Tactile-Based Alert Device to Improve Safety Around High-Risk Areas

Abstract: Aircraft carrier personnel are exposed to additional risks when working around propeller-driven aircraft such as the E-2C and C-2A. To avoid injury from rotating propeller blades, an alert system is needed that performs even under conditions of poor visibility or high noise. Creare proposes a proximity-based, tactile alert device that can be worn as a wristband to alert the wearer when (s)he penetrates a region that is established as high-risk. The components of the system are inexpensive enough so that the device can be standard issue to all deck personnel. Creare will demonstrate the feasibility of our innovation during Phase I through bench-top tests. During Phase II, we will develop and field-test a prototype system. Because the proposed alert system provides proximity-based tactile feedback, these devices could be used for personnel guidance as well as personnel safety. For instance, the device could be used by the visually impaired to locate particular zones or objects (e.g., the telephone or doorknob).

NOESIS, INC.

10530 Linden Lake Plaza, Suite
Manassas, VA 20109

Phone: (410) 349-4001

PI: Mr. Thomas Buckingham

Topic#: NAVY 01-158 **Awarded:** 27NOV01

Title: Enhanced Propeller Visibility

Abstract: High tempo 24 hour day and night flight operations on a U.S. Navy aircraft carrier create a hazardous environment that taxes even the best safety procedures and programs. As the only propeller driven aircraft deployed on carriers, the E-2C and C-2A present a unique problem. Their rotating propellers create a serious threat to the safety of maintenance and flight crews working in close proximity to the aircraft, particularly in low light/low visibility conditions. Understanding the nature of the problem, this proposal addresses a visual warning system that



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Success Stories

Points of Contact

Transitions (TAP)

Small Business Awarded NAVY Phase III Contract for Enhanced Propeller Visibility

Noesis Inc. of Manassas, VA has been awarded a not-to-exceed \$25,000,000 Phase III Small Business Innovative Research (SBIR) program contract for [Topic N01-158 Enhanced Propeller Visibility](#).

Although the phase III award was made in December of 2005, it all began in May of 2001, with the Navy including this NAVAIR phase I topic in their FY-2001.2 SBIR solicitation. The Navy received 14 submissions on this topic and made [3 phase I awards](#).

The Noesis Inc. phase I work was a feasibility study to demonstrate new ways to improve the safety of passengers boarding propeller-driven aircraft, as well as the flight deck crews who work in close proximity to these craft in low light, poor-visibility conditions. Their work was meritorious and the Navy awarded them a Phase II SBIR on this topic. The phase II led to a promising technology that enhanced the visual acuity of stationary and rotating objects during night and low level light operations.

The application of Noesis's technology can come in many forms, such as paint, acrylic mold, peel & stick. It remains visible three times longer than previous technologies and can



The dangers of a Navy E-2C aircraft propeller at night

The Future of SBIR

- Due to sunset at the end of FY-2008 (Sept 30, 2008)
- Last reauthorization was CY-2000 after lapsing in FY-2000
- Popular program facing many challenges
- Full re-authorization may be subordinated to higher profile congressional concerns (elections, economy, war, deficits..)
- House & Senate have vastly different visions of the program (e.g.: eligibility, cap at 2.5%, admin \$\$\$, commercialization \$\$\$, special set asides)

House Bill H.R. 5819

Contentious Points

- The VC issue, changes in size standards allowing VC ownership and control
- Raise in award levels to \$300k / \$2.2m (can exceed these levels as desired)
- Allow Consecutive Phase II Awards
- Allow direct Phase II awards (both SBIR and STTR)
- SBIR cap funding remains at 2.5%
- **Result: Larger but fewer awards (perhaps by 50%)**

House Bill H.R. 5819

Welcomed Items

- Increase in the number of topics
- Shorter times from evaluation to awards
- Better proposal debriefing methods
- Funding for Commercialization programs; Authorization of \$27.5m for agencies
- Movement to increase "fast track awards"
- Raise commercialization assistance \$4k to \$5k for phase I, and not to exceed \$8k for phase II
- Comptroller General audit of how agencies calculate their extramural research budgets.

What You Can Do

- **Let your federal, state and local governments know about the value of the program to your business.**
- **Consider working with industry trade groups to demonstrate a “collective alliance” for program reauthorization.**
- **Read the “SBIR Insider” to get the latest information on the program and reauthorization efforts.**

Insider Tips

- **The Power of Partnering**
- **The Use of Federal Labs as a Partner**
- **FFRDC exemption for STTR**
- **Potential DoD Academic Partners**
 - Air Force Academy – Colorado Springs, CO**
 - Naval Postgraduate School – Monterey, CA**
- **Federal Laboratory Consortium (FLC)**
 - FLC Locator**
 - FLC Far West Region Support**

SBIR Tools

[Advanced Search](#)
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Web

Results 1 - 10

[Department of Defense: **SBIR/STTR**/Fast Track - Main Page](#)

The Department of Defense **Small Business Innovation Research (SBIR)** Program -- \$1/2 billion in early-stage R&D funding for small technology companies.

www.acq.osd.mil/osbp/sbir/ - 8k - [Cached](#) - [Similar pages](#)

[SBA - Office of Technology - **SBIR/STTR** Main Home Page](#)

Government Contracting and Business Development - Small Business Administration.

www.sba.gov/SBIR/ - 14k - [Cached](#) - [Similar pages](#)

[SBIR / STTR Gateway - News and Search Engine](#)

The **SBIR** / STTR National Gateway provides news and information to help you locate **SBIR** opportunities from the federal agencies, state governments, academia, ...

www.zyn.com/sbir/ - 20k - [Cached](#) - [Similar pages](#)

[Small Business Research Funding Opportunities \(**SBIR** and **STTR**\)](#)

Links to Small Business Research Funding Opportunities and **SBIR** / STTR Applications.

grants.nih.gov/grants/funding/sbir.htm - 29k - [Cached](#) - [Similar pages](#)

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SBIR Gateway

The Most Comprehensive and Easy to Use
SBIR Information Site

EZ SBIR Topic Search

includes all agencies open topics

Resources

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News Items

[View Latest SBIR News](#)

News Updated 1/23/08

[DoD Releases 08 STTR](#)

Opens 2/19/08 Closes 3/19/08

[FFRDCs as STTR Partners](#)

List of Federally Funded
Research & Development Centers

[DOT Announces 08 SBIR](#)

Opens 2/15/08 Closes 5/01/08

[SBIR 2007 Person of the Year](#)

Connie Jacobs

[NSF SBIR Diversity Supplements](#)

SBIR/STTR Diversity Collaborative Supplements

[ED Opens 2 SBIRs](#)

Updated: Opens 12/5/07 Closes 1/22/08

[DHS Issues 08.1 SBIR Prerelease](#)

Opens 12/03/07 Closes 2/04/08

[SBIRWorld Closes](#)

Replaced by SBIR.GOV

Search Services

[Open SBIR/STTR Solicitation Topics](#)

Includes All Agencies Open SBIR/STTR Topics

[Closed SBIR/STTR Solicitation Topics](#)

Topics often *recycled* for future solicitations

[Past SBIR/STTR Awards](#)

SBIR/STTR Awards Databases

[Federal Laboratory R&D Resources](#)

Keyword search for federal tech resources

SBIR Gateway Topic Search

National SBIR/STTR Gateway Search Service Results by Zyn Search®

Searched SBIR/STTR Topic files for "energy"

Displaying hits 1 through 20.

1. [\(SBIR\) Navy - Thermally Stable High Energy Lithium-Ion Batteries for Naval Aviation Applications](#)
Score: **** Thermally Stable High Energy Lithium-Ion Batteries for Naval Aviation Applications Navy SBIR 2008.1 - Topic N08-017 NAVAIR - Mrs. Janet McGovern - navair.sbir@navy.mil Opens: December 10, 2007 - Closes: January 9, 2008 N08-017 TITLE: Thermally Stable High Energy Lithium-Ion Batteries for Naval Aviation Applications TECHNOLOGY AREAS: Air Platform, Ground/Sea Vehicle....
2. [\(SBIR\) OSD - High-Capacity, High-Rate Thermal Energy Storage \(TES\) Technologies and Systems](#)
Score: **** High-Capacity, High-Rate Thermal Energy Storage (TES) Technologies and Systems Office Of The Secretary Of Defense (OSD) SBIR 2008.1 - Topic OSD08-EP1 Opens: December 10, 2007 - Closes: January 9, 2008 OSD08-EP1 TITLE: High-Capacity, High-Rate Thermal Energy Storage (TES) Technologies and Systems TECHNOLOGY AREAS: Ground/Sea Vehicles, Materials/Processes....
3. [\(SBIR\) OSD - Advanced Materials and Chemistries for Electrochemical Energy Storage Devices](#)
Score: **** Advanced Materials and Chemistries for Electrochemical Energy Storage Devices Office Of The Secretary Of Defense (OSD) SBIR 2008.1 - Topic OSD08-EP2 Opens: December 10, 2007 - Closes: January 9, 2008 OOSD08-EP2 TITLE: Advanced Materials and Chemistries for Electrochemical Energy Storage Devices TECHNOLOGY AREAS: Air Platform, Ground/Sea Vehicles OBJECTIVE: Identify, investigate, characterize, and apply new materials and chemistries for advanced battery applications....
4. [\(SBIR/STTR\) DOE - Materials For Advanced Nuclear Energy Systems](#)
Score: **** Materials For Advanced Nuclear Energy Systems Department of Energy - FY 2008 Office of Energy Basic Energy Sciences (BES) SBIR/STTR - Topic DOE 08-5 Opens: September 19, 2007 - Closes: November 27, 2007 (8pm EST) 5. Materials For Advanced Nuclear Energy Systems The Generation IV nuclear energy initiative is an international collaboration to identify, assess, and develop sustainabl....
5. [\(SBIR/STTR\) DOE - Solid State Electrolyte Development For Advanced Energy Storage Devices](#)
Score: **** Solid State Electrolyte Development For Advanced Energy Storage Devices Department of Energy - FY 2008 Office of Energy Basic Energy Sciences (BES) SBIR/STTR - Topic DOE 08-6 Opens: September 19, 2007 - Closes: November 27, 2007 (8pm EST) 6. Solid State Electrolyte Development For Advanced Energy Storage Devices The projected doubling of world energy consumption withi

SBIR Gateway Topic Search

Thermally Stable High Energy Lithium-Ion Batteries for Naval Aviation Applications

Navy SBIR 2008.1 - Topic N08-017

NAVAIR - Mrs. Janet McGovern - navair.sbir@navy.mil

Opens: December 10, 2007 - Closes: January 9, 2008

N08-017 TITLE: Thermally Stable High Energy Lithium-Ion Batteries for Naval Aviation Applications

TECHNOLOGY AREAS: Air Platform, Ground/Sea Vehicles

ACQUISITION PROGRAM: PMA-273 - T-45 Naval Undergraduate Flight Training System; JSF

OBJECTIVE: Develop thermally stable high energy Lithium-ion battery technology for Navy aircraft in order to meet increasing power and energy demands, satisfy mission operational temperature requirements, and provide increased reliability while reducing weight.

DESCRIPTION: Increasingly demanding mission requirements placed on Navy aircraft and other military applications have necessitated high energy and high power storage systems capable of operating over a broad temperature range. High energy and high power Lithium-ion systems have proven themselves in many military, commercial and aerospace applications. However, continued development of this technology is required in order to fully satisfy the broad operational temperature range and high energy density requirements of Navy aircraft batteries. Presently the temperature range of the technology is limited to a maximum temperature of 60 degrees centigrade. Operating temperatures for existing aircraft batteries is 71 degrees centigrade with exposure up to 85 degrees centigrade. Novel approaches are sought to make the electrodes stable in electrolyte at these temperatures. With technology as it is now, the batteries have a short service life and high operating price if used.

SBIR Gateway Solicitation Date Finder



SBIR/STTR Phase I Solicitation Finder
last updated 1/22/08

[Open Solicitations](#) | [Future Solicitations](#) | [Closed Solicitations](#) | [Return to SBIR](#)

Open/Released Solicitations			
Program	Release Dates	Accepts Proposals	Closing Dates
DoD STTR 2008	22 Jan 2008	19 Feb 2008	19 Mar 2008
DHS SBIR	03 Dec 2007	19 Dec 2007	04 Feb 2008
NIST SBIR R	8 Nov 2007	8 Nov 2007	25 Jan 2008
NIST SBIR TT Tech Transfer	8 Nov 2007	8 Nov 2007	23 Jan 2008
NOAA SBIR	18 Oct 2007	18 Oct 2007	23 Jan 2008
NIH SBIR/STTR Special Funding	The NIH frequently offers special SBIR/STTR grant opportunities that are not part of their regular omnibus SBIR solicitation. View current NIH RFAs & PAs		

Future Solicitations			
<i>** dates are subject to change</i>			
Program	Release Dates	Accepts Proposals	Closing Dates
HHS/NIH SBIR/STTR (Grants) Non-AIDS Related Topics	15 Jan 2008	15 Jan 2008	5 Apr 2008 5 Aug 2008

Zyn.com/SBIR

DoD Releases FY08 STTR (1/22/08) - The DoD has released their FY-2008.A STTR solicitation which will open to accept proposals on February 19, 2008 and close on March 19, 2008 **at 6 a.m. EST**

Prior to the opening date of February 19, 2008, proposers have the opportunity to contact topic authors by telephone or email to ask technical questions about specific solicitations topics. Questions should be limited to specific information related to improving the understanding of a particular topic's requirements. Offerors may not ask for advice or guidance on solution approach, nor submit additional material to the topic author. If information given in response to a question is deemed necessary for the preparation of proposals, that information will be made available to the public through the DoD's SITIS (electronic Q&A) system www.dodsbir.net/sitis. After February 18, questions can still be posed, but only through the DoD's public SITIS system.

The DoD's STTR solicitation includes topics from the Air Force (29), Army (42), Navy (34), DARPA (15), and OSD (3). The solicitation can be found on the DoD's web site at www.acq.osd.mil/osbp/sbir/solicitations/sttr08A

This is the third year that the STTR program is operating under SBA's updated STTR Policy Directive (released 12/16/05) that allows partnering with a Federally Funded Research & Development Center (FFRDC) without obtaining an SBA waiver. An updated list of FFRDCs is available at www.zyn.com/sbir/articles/ffrdc.htm The STTR Policy Directive is available at www.zyn.com/sbir/articles/sba-sttr_PDa.htm.

NOTE: The DoD's topics are subject to change/cancellation during the initial release time period, so it is wise to periodically check for changes.

Do you want the Zyn SBIR Gateway to notify you when changes to the DoD FY08 STTR are made? If so, please enter your email address below and you will receive an email notification.

Please notify me if changes are made to the DoD 08 STTR solicitation.

Email Address:

Email addresses will remain private and will not be shared.

Cross Agency SBIR Resources

- **SBIR Gateway News & Search – zyn.com/sbir**
- **NSF's Cross Agency Site (*official*) – sbir.gov**
- **SBA – www.sba.gov/sbir**
- **Grants – www.grants.gov**
- **Contracts – www.fedbizopps.gov/**

Questions? – Call or email me

Thank You

**Rick Shindell
SBIR Gateway
Zyn Systems
360-681-4123
rick@zyn.com**

www.zyn.com/sbir