The DOE Webinar will begin shortly . . .

- **Why is there no sound?**
  - This webinar is broadcast via your computer. Try turning the volume up on your computer speakers.

- **Will DOE provide access to the recorded webinar after the meeting?**
  - Yes, all those who registered will receive a link to the slides and to the recorded webinar soon after the meeting. It will also be available on the DOE SBIR/STTR web site.

- **Where can I find the Topics being discussed today?**
  - This link will take you to the FY 2017 Phase I Release 1 Topics: http://science.energy.gov/sbir/funding-opportunities/.

- **What if my question was not answered at today's webinar?**
  - Please contact the point of contact that follows each topic in the document listed above. If you have a question about the application process, please send us an email at sbir-sttr@science.doe.gov.

U.S. DEPARTMENT OF **ENERGY** | **SBIR/STTR Programs Office**

DOE's
Small Business Innovation Research (SBIR) and Small Business Technology TRansfer (STTR) Programs
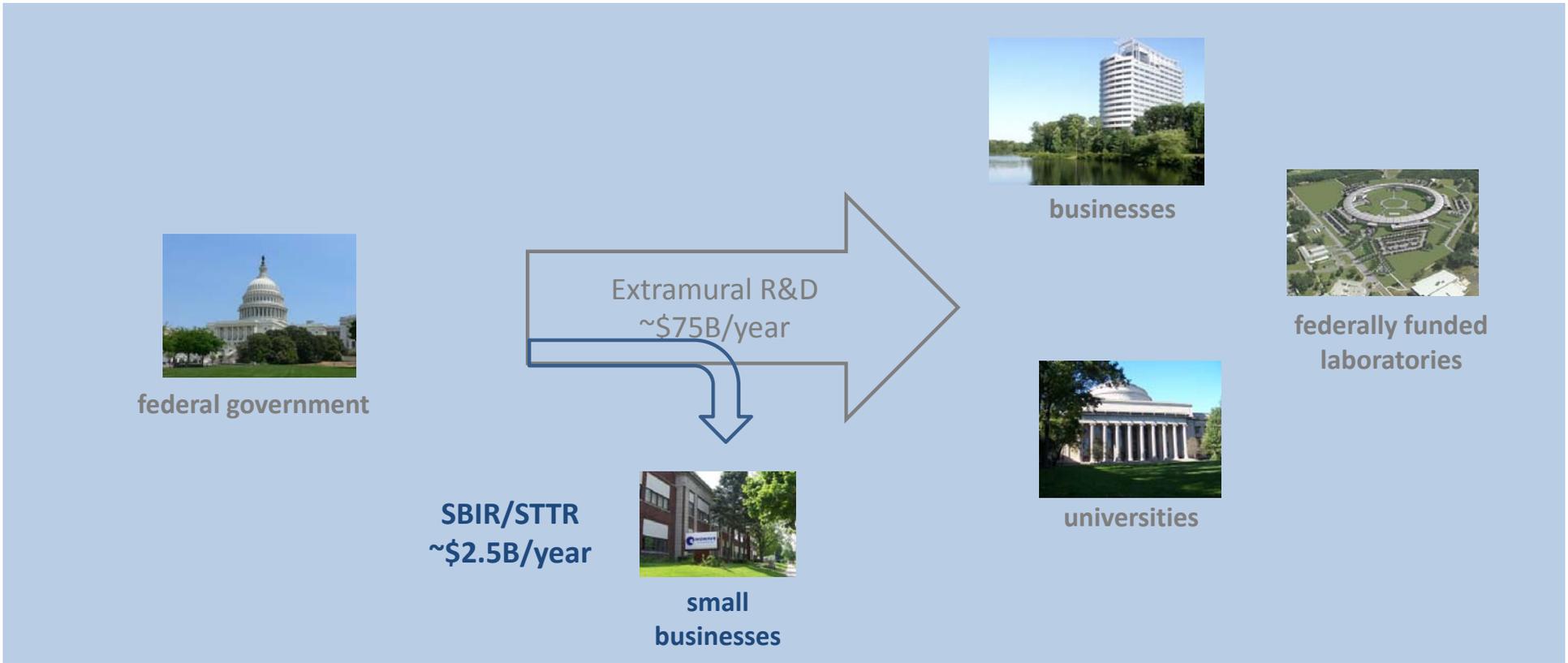
Manny Oliver
Director, DOE SBIR/STTR Programs Office

DOE Webinar
August 23, 2016

Overview of Federal SBIR/STTR Programs

FEDERAL Extramural R&D

businesses

federally funded
laboratories

Extramural R&D
~$75B/year

federal government

universities

SBIR/STTR
~$2.5B/year

small
businesses

Program Goals

Small Business Innovation Research (SBIR) *est. 1982*

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

Small Business Technology Transfer (STTR) *est. 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

*SBIR and STTR were reauthorized on December 31, 2011 (P.L. 112-81) through September 30, 2017*

Major Differences between SBIR & STTR

- STTR: Requires Collaboration with a Research Institution
  - Research Institution
    - College, University, Federal R&D Laboratory, other non-profit research organization
- Principal Investigator primary employment
  - SBIR: employed by the small business
  - STTR: employed by the small business OR research institution
- Percentage of R/R&D conducted by the small business
  - SBIR
    - Phase I: minimum 2/3 by small business
    - Phase II: minimum 1/2 by small business
  - STTR:
    - Phase I & II: minimum 40% by small business; minimum 30% by research institution
 - Subcontracting is permitted provided the level of effort requirements above are met

SBIR & STTR Funding Levels

- Agencies allocate a percentage of their extramural R/R&D budgets for the SBIR & STTR programs
  - SBIR: 3.2% (FY 2017), for agencies with >$100M in extramural R/R&D
  - STTR: 0.45% (FY 2017), for agencies with >$1B in extramural R/R&D
- Congress has increased the allocation percentages since the programs were initiated

AMOUNT OBLIGATED*

ALLOCATION PERCENTAGE
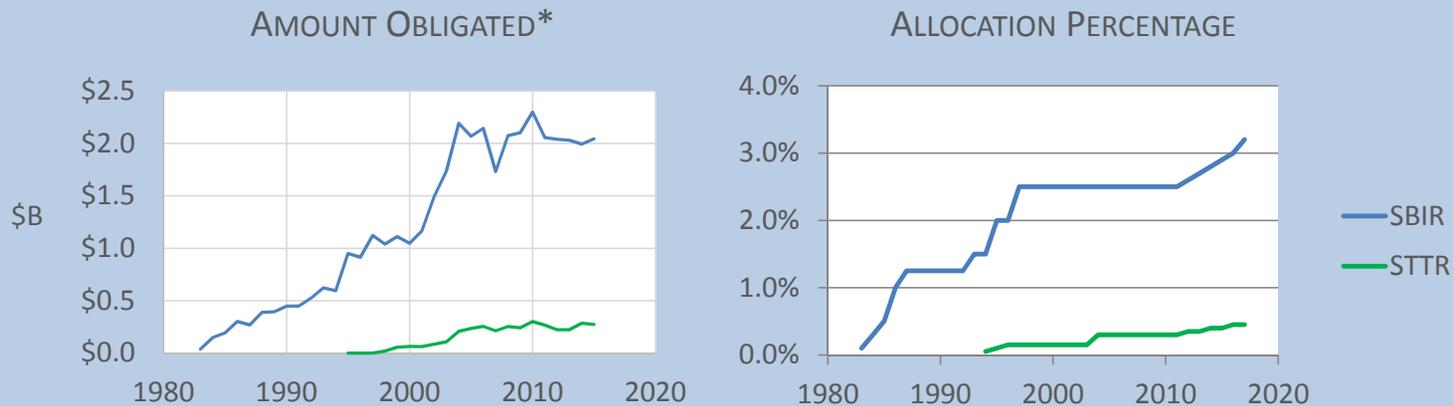
*source: SBIR.gov, 8/22/2016

SBIR/STTR Budgets by Agency, FY2015
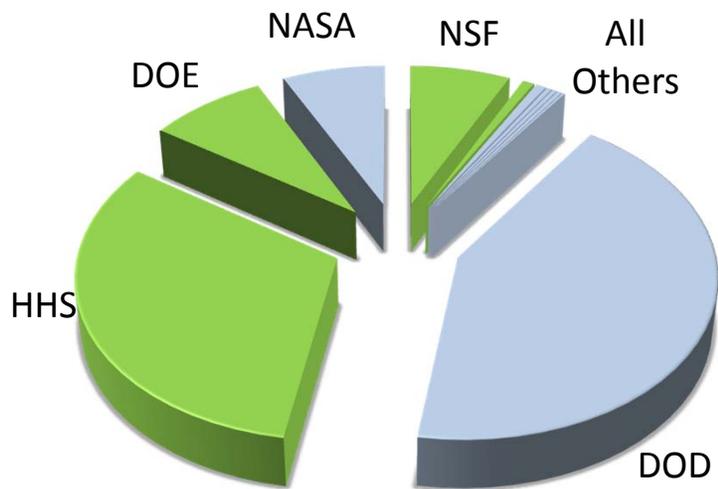
~ $2.5B in FY2015 across all agencies

Legend:
- Grants
- Contracts

Pie chart labels: NASA, NSF, All Others, DOE, HHS, DOD

Agencies with SBIR and STTR Programs	Budget
Department of Defense (DOD)	$ 1.070 B
Department of Health and Human Services (HHS), including the National Institutes of Health (NIH)*	$797.0 M
Department of Energy (DOE), including Advanced Research Projects Agency – Energy (ARPA-E)	$206.1M
National Aeronautics and Space Administration (NASA)	$ 180.1 M
National Science Foundation (NSF)	$176.0 M

Agencies with SBIR Programs	Budget
U.S. Department of Agriculture (USDA)	$20.3M
Department of Homeland Security (DHS): Science and Technology Directorate (S&T) and Domestic Nuclear Detection Office (DNDO)	$17.7 M
Department of Commerce: National Oceanic and Atmospheric Administration (NOAA) and National Institute of Standards and Technology (NIST)*	$8.4M
Department of Transportation (DOT)	$7.9 M
Department of Education (ED)	$7.5 M
Environmental Protection Agency (EPA)	$4.2 M

*NIH also issues contracts

U.S. DEPARTMENT OF ENERGY | **SBIR/STTR Programs Office**

Small Business Eligibility for SBIR & STTR

- For-profit U.S. business
- 500 employees or fewer, including affiliates
- Ownership *(applies to all agencies)*
  - Be a concern which is more than 50% directly owned and controlled by one or more individuals (who are citizens or permanent resident aliens of the United States), other small business concerns (each of which is more than 50% directly owned and controlled by individuals who are citizens or permanent resident aliens of the United States), or any combination of these
  - Joint ventures where the entities meet the requirements above
- Portfolio Companies *(currently only NIH & ARPA-E)*
  - Be a concern which is more than 50% owned by multiple venture capital operating companies, hedge funds, private equity firms, or any combination of these. No single venture capital operating company, hedge fund, or private equity firm may own more than 50% of the concern.
- Performance of R&D
  - All R&D must be performed in the United States

3 Phases

PHASE I: FEASIBILITY, PROOF OF CONCEPT
- Award Amount: $150,000 (guideline), $225,000 (max.)
- Project Duration: 6-12 months

PHASE II: CONTINUE R/R&D FOR PROTOTYPES OR PROCESSES
- Award Amount: $1,000,000 (guideline), $1,500,000 (max.)
- Project Duration: 2 years

PHASE III: COMMERCIALIZATION
- Federal or Private Funding (non-SBIR/STTR funds)
- No dollar or time limits

SBIR and STTR Awards

- Critical Early Stage R/R&D funding
  - The SBIR & STTR programs provide funding for high risk, innovative projects
  - SBIR & STTR awards provide credibility when seeking funding or partners
- SBIR/STTR awards are executed as grants or contracts
  - No repayment
  - No dilution of company equity
  - No cost sharing is required for Phases I and II. Cost sharing may not be used as an evaluation criteria.

Basic Science
Government Funding

Early Stage
Innovation
SBIR & STTR
Angels

Commercialization
Private Funding

Intellectual Property

- **Patent rights**
  - Small business concerns normally retain the principal worldwide patent rights to any invention developed with Government support

- **Government Use**
  - The Federal Government receives a royalty-free license for Federal Government use

http://www.uspto.gov/

U.S. DEPARTMENT OF
ENERGY

SBIR/STTR Programs Office

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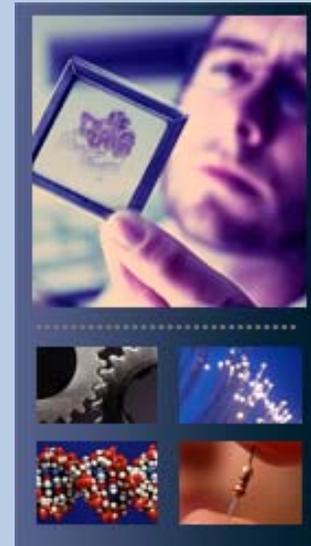
Data Protection

- Protection Period
  - Data generated from your R/R&D is protected from public disclosure for a minimum of 4 years (civilian agencies) or 5 years (DOD) after the conclusion of your award (Phase I, Phase II, or federally funded Phase III)
- Government Use
  - The Government retains a royalty-free license for Government use of any technical data delivered under an SBIR award, whether patented or not
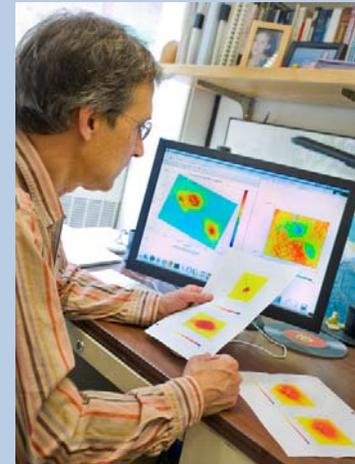
DOE SBIR & STTR Programs: Technology Areas

U. S. Department of Energy Mission

- **The mission of the Department of Energy** is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.
  - **Goal 1:** Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in **clean energy** technologies.
  - **Goal 2:** Maintain a vibrant U.S. effort in **science and engineering** as a cornerstone of our economic prosperity, with clear leadership in strategic areas.
  - **Goal 3:** Enhance **nuclear security** through defense, nonproliferation, and environmental efforts.

Program Offices Participating in the DOE SBIR/STTR Programs

Electricity Delivery & Energy Reliability
Energy Efficiency & Renewable Energy
Fossil Energy
Nuclear Energy

Advanced Scientific Computing Research
Basic Energy Sciences
Biological & Environmental Research
Fusion Energy Sciences
High Energy Physics
Nuclear Physics

Defense Nuclear Nonproliferation
Environmental Management

U.S. DEPARTMENT OF ENERGY

SBIR/STTR Programs Office

Operation of the
DOE SBIR and STTR Programs

- DOE Program Office
  - Develop Topics
  - Identify Reviewers (Scientific Peer Review)
  - Recommend Awardees
  - Manage Projects

Technical Expertise Leveraged Throughout DOE

- DOE Chicago Office
  - Negotiate Grants
  - Issue New and Continuation Awards
  - Grant Closeout

Single Grants Office for Awardees

- DOE SBIR/STTR Programs Office
  - Develop Funding Opportunity Announcements
  - Administer Review and Selection Process
  - Ensure Compliance with SBIR/STTR Legislation
  - Conduct Outreach

Single Administrative Office for Applicants

Information Available at DOE Program Office Websites

- Mission
- Funding Priorities and Announcements (non-SBIR)
- Technical Reference Data and Reports
- Conference Proceedings
- Contact Information

DOE Program Offices supporting
Goal 1: Clean Energy Technologies

- [Office of Electricity Delivery and Energy Reliability](#)
- [Office of Energy Efficiency and Renewable Energy](#)
- [Office of Fossil Energy](#)
- [Office of Nuclear Energy](#)

R&D Topic Areas
- Clean Coal Technologies
- Advanced Turbine Technology
- Oil and Gas Technologies
- Advanced Materials and Technologies for Nuclear Energy
- Smart Grid Technologies
- Energy Storage
- Bio-energy & Biofuels
- Hydrogen & Fuel Cells
- Solar Power
- Water Power
- Wind Energy
- Advanced Manufacturing
- Efficient Buildings & Vehicles

DOE Program Offices Supporting
Goal 2: Science and Engineering Leadership

- Advanced Scientific Computing Research
- Basic Energy Sciences
- Biological and Environmental Research
- Fusion Energy Sciences
- High Energy Physics
- Nuclear Physics

R&D Topic Areas
- Advanced Detectors
- Accelerator technology
- RF Components and Systems
- Data Acquisition, Processing and Analysis
- Fusion Energy Systems
- High Performance Computing & Networking
- Modeling and Simulation
- Atmospheric Measurement Technology
- Genomic Science and Related Biotechnologies
- Advanced Sources: neutron, x-ray, electron

DOE Program Offices Supporting
Goal 3: Nuclear Security

- Office of Defense Nuclear Nonproliferation
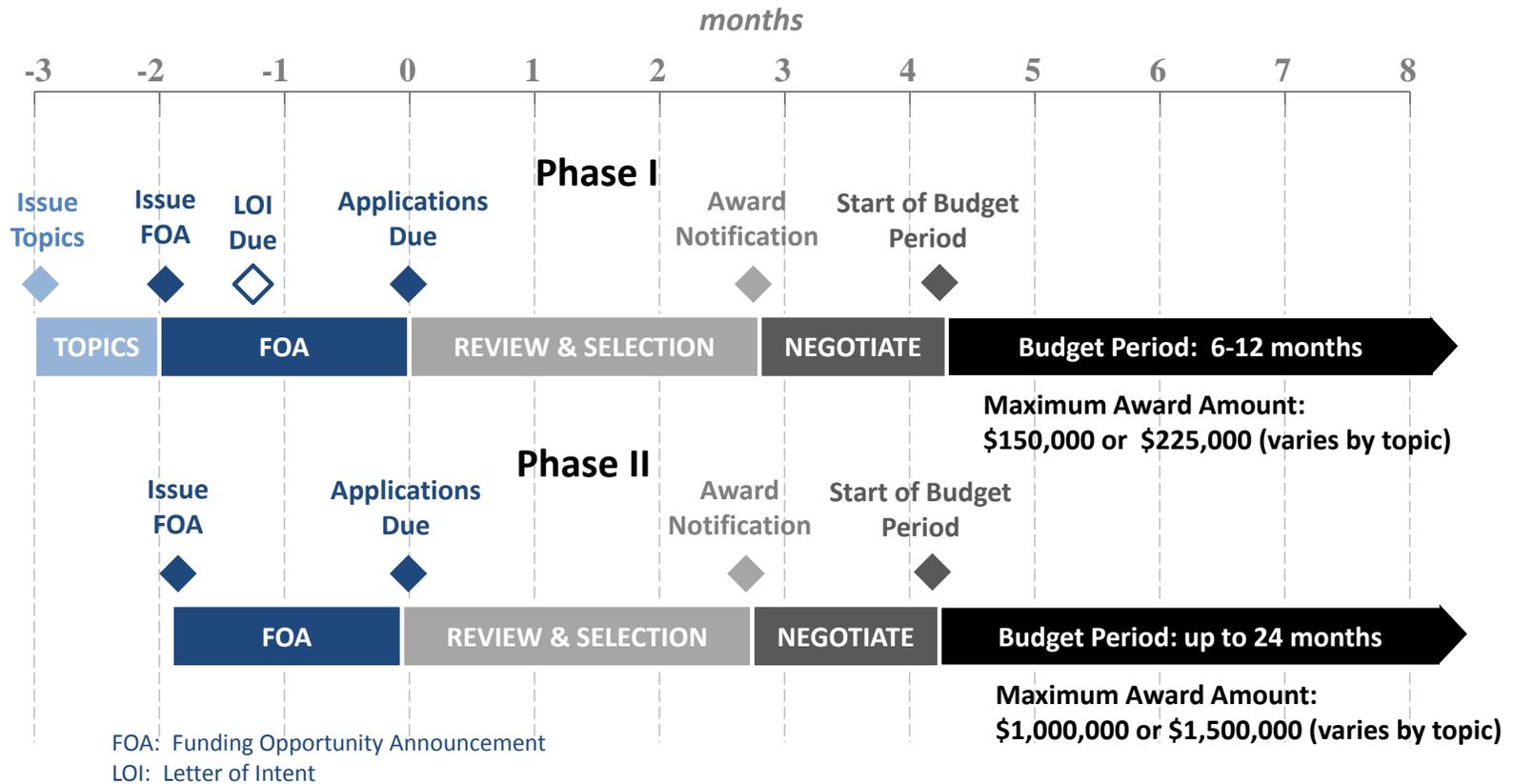- Office of Environmental Management

R&D Topic Areas
- Novel Radiation Monitoring Concepts
- In Situ Remediation
- Facility Deactivation and Decommissioning
- Remote Sensing
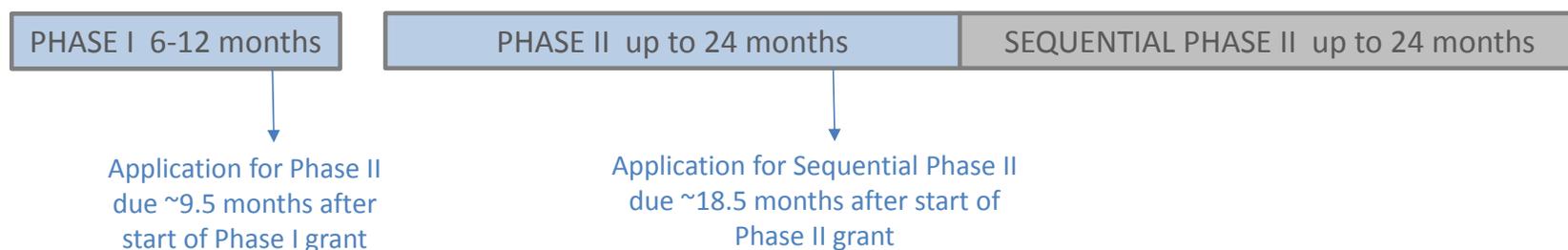- Global Nuclear Safeguards R&D
- Nuclear Detonation Detection

DOE SBIR & STTR Programs: Application & Award Process

Application & Award Timelines

months

-3 -2 -1 0 1 2 3 4 5 6 7 8

Phase I

| Issue Topics | Issue FOA | LOI Due | Applications Due | | Award Notification | Start of Budget Period |

| TOPICS | FOA | REVIEW & SELECTION | NEGOTIATE | Budget Period: 6-12 months |

Maximum Award Amount:
$150,000 or $225,000 (varies by topic)

Phase II

| Issue FOA | Applications Due | Award Notification | Start of Budget Period |

| FOA | REVIEW & SELECTION | NEGOTIATE | Budget Period: up to 24 months |

Maximum Award Amount:
$1,000,000 or $1,500,000 (varies by topic)

FOA: Funding Opportunity Announcement
LOI: Letter of Intent

U.S. DEPARTMENT OF ENERGY | **SBIR/STTR Programs Office**

Award Sequence

PHASE I 6-12 months		PHASE II up to 24 months	SEQUENTIAL PHASE II up to 24 months

Application for Phase II
due ~9.5 months after
start of Phase I grant

Application for Sequential Phase II
due ~18.5 months after start of
Phase II grant

Beginning in FY 2017: Fast-Track Applications (combined Phase I & II applications) will not be accepted

Sequential Phase II Awards (Maximum Award Amount: $1,000,000)

- Phase IIA: For projects requiring more time and funding than available with a single Phase II award to complete prototype or process development
- Phase IIB: For projects that have successfully completed prototype or process development and require additional R&D funding to transition an innovation towards commercialization

FY2017 SBIR/STTR Phase I
Funding Opportunity Announcements

**Phase I
Release 1**

- Office of Advanced Scientific Computing Research (ASCR)
- Office of Basic Energy Sciences (BES)
- Office of Biological and Environmental Research (BER)
- Office of Nuclear Physics (NP)

**Phase I
Release 2**

- Office of Defense Nuclear Nonproliferation (NA)
- Office of Electricity Delivery and Energy Reliability (OE)
- Office of Energy Efficiency and Renewable Energy (EERE)
- Office of Environmental Management (EM)
- Office of Fossil Energy (FE)
- Office of Fusion Energy Sciences (FES)
- Office of High Energy Physics (HEP)
- Office of Nuclear Energy (NE)

U.S. DEPARTMENT OF ENERGY | **SBIR/STTR Programs Office**

Schedule: FY17 Phase I, Releases 1&2

Phase I FOA Schedule	Release 1	Release 2
Topics Issued	Monday, July 18, 2016	Monday, October 31, 2016
Webinar(s)	Week of July 25, 2016	Week of Monday November 07, 2016
FOA Issued	Monday, August 15, 2016	Monday, November 28, 2016
Webinar(s)	Monday, August 23, 2016	Friday, December 02, 2016
Letters of Intent (LOI) Due	Tuesday, September 06, 2016	Monday, December 19, 2016
Applications Due	Monday, October 17, 2016	Tuesday, February 07, 2017
Award Notification	Monday, January 09, 2017*	Monday, May 01, 2017*

preliminary dates subject to change

U.S. DEPARTMENT OF ENERGY | SBIR/STTR Programs Office

Schedule: FY16 Phase II, Releases 1&2

Phase II FOA Schedule	Release 1	Release 2
FOA Issued	Monday, October 24, 2016	Monday, February 13, 2017
Letters of Intent Due (Supplemental Phase II only)	Monday, November 14, 2016	Wednesday, March 15, 2017
Full Applications Due	Tuesday, December 13, 2016	Tuesday April 04, 2017
Award Notification	Monday, February 27, 2017*	Monday, June 19, 2017*

preliminary dates subject to change

U.S. DEPARTMENT OF ENERGY | **SBIR/STTR Programs Office**

Online Assistance for the Application Process

- We have launched a new online learning system to assist new applicants:
  - http://www.doesbirlearning.com/
- Additional resources can be found on our website:
  - http://science.energy.gov/sbir/applicant-and-awardee-resources/

U.S. DEPARTMENT OF **ENERGY** | **SBIR/STTR Programs Office**

Topics

- Topics Document
  - DOE primarily uses focused topics
  - Issued 4 weeks prior to the Funding Opportunity Announcement
- Communication with DOE program managers
  - Open communication permitted about topic scope
- Webinar
  - DOE program managers discuss their topics
  - Applicants submit questions in advance or during the webinar
  - Webinars are recorded and available from our website

U.S. Department of Energy

Small Business Innovation Research (SBIR) and
Small Business Technology Transfer (STTR) Program

Topics
FY 2017
Phase I
Release 1

Version 7, August 19, 2016

Participating DOE Research Programs

- Office of Advanced Scientific Computing Research
- Office of Basic Energy Sciences
- Office of Biological and Environmental Research
- Office of Nuclear Physics

Example Topic

- Topic & Subtopic
  - You must specify the topic and subtopic in your letter of intent and application
- Topic Header
  - List the maximum award amounts for Phase I & Phase II ant the types of application accepted
- Program Manager
  - Each subtopic lists the responsible DOE program manager
- Other Subtopic
- References

7. INSTRUMENTATION FOR ADVANCED NANOMETER SCALE OPTICAL SPECTROSCOPY

Maximum Phase I Award Amount: $150,000	Maximum Phase II Award Amount: $1,000,000
Accepting SBIR Applications: YES	Accepting STTR Applications: YES

The Department of Energy seeks to advance optical nanoprobe technologies that facilitate fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels. The Department is particularly interested in forefront advances in imaging and analysis techniques that combine nanometer-scale through micron-scale spatial resolution, optical excitation and spectroscopic detection over a large wavelength range. Time-dependent phenomena at nanoscale dimensions are important and tools are needed to explore energy flow, exciton dynamics and charge transport in nanoscale materials, nanostructures and assemblies of nanostructures for use in present and future energy applications. Grant applications that do not fall within the topic will not be considered.

Grant applications are sought in the following subtopics:

a. High Spatial Resolution Nanometer Scale Optical Spectroscopy
Information on carrier transport and dynamics phenomena associated with materials and nanostructures is often available from optical spectroscopies involving interactions with electromagnetic radiation ranging from the infrared spectrum to ultraviolet. Fast laser technologies can provide temporally resolved chemical information via optical spectroscopy or laser-assisted mass sampling techniques. These approaches provide time resolution ranging from the breakage or formation of chemical bonds to conformational changes in nanoscale systems but generally lack the simultaneous spatial resolution required to analyze individual molecules or nanostructures.

Grant applications are sought that make significant advancements in spatial resolution towards the single-nanometer for spectroscopic imaging instrumentation available to the research scientist. The nature of the advancement may span a range of approaches including sub-diffraction limit illumination or detection, selective sampling, and coherent or holographic signal analysis. Conventional Nearfield Scanning Optical Microscopy (NSOM) probes and techniques do not have sufficient spatial resolution, spectral range and optical coupling efficiency. An optical tip technology is needed that is potentially scalable to manufacturing, and will yield low-cost, high performance, robust instruments that are affordable by the larger scientific community.

Questions – Contact: George Maracas, george.maracas@science.doe.gov

b. Other
In addition to the specific subtopics listed above, the Department invites grant applications in other areas that fall within the scope of the topic description above.

Questions – Contact: George Maracas, george.maracas@science.doe.gov

References:
1. BESAC Subcommittee, 2015, Challenges at the Frontiers of Matter and Energy: Transformative Opportunities for Discovery Science, A Report from the Basic Energy Sciences Advisory Committee. (http://science.energy.gov/bes/community-resources/reports/).

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SBIR/STTR Programs Office
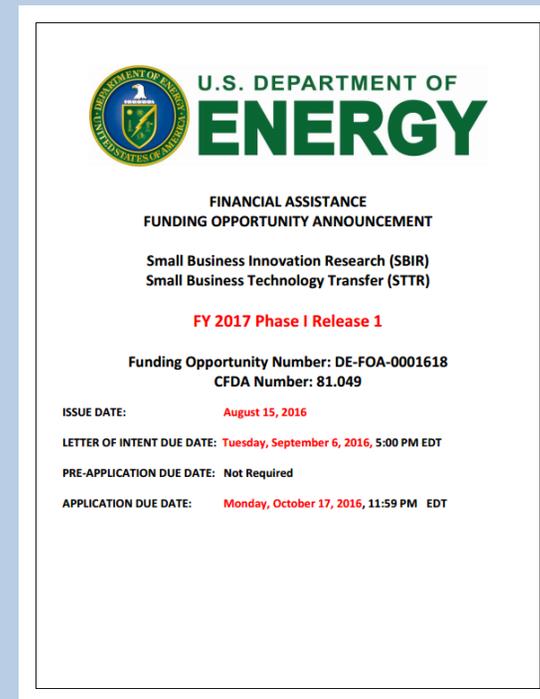
Technology Transfer Opportunities (TTOs)

- An opportunity to transfer inventions made by a DOE National Lab or university to your small business for commercialization

- Awardees receive
  - an SBIR/STTR grant and
  - an option to license the technology

- Please review TTO information section at the beginning of the topics document if you plan to submit an application to a TTO.

Example Technology Transfer Opportunity Topic

- Technology Transfer Opportunity
  - The topic or subtopic will be clearly labeled
- Research Organization
  - The DOE National Lab or university responsible for the TTO is listed along with contact information and other references
  - Please contact the Lab or university to obtain information about the TTO
- DOE Program Manager

21. TECHNOLOGY TRANSFER OPPORTUNITIES: BIOLOGICAL AND ENVIRONMENTAL RESEARCH FROM BESC

Maximum Phase I Award Amount: $225,000	Maximum Phase II Award Amount: $1,500,000
Accepting SBIR Applications: YES	Accepting STTR Applications: YES

b. Use of Extremophiles and their Enzymes for Biofuels and Biomaterial's Production
A collaboration between Drs. Michael W. Adams (UGA) and Robert Kelly (NCSU) led to the development of a portfolio of technologies that take advantage of characteristics of P. furiosus (a hyperthermophile) to metabolize CO_2 into chemical commodities. The portfolio includes isolated recombinant enzymes, as well as microbial constructs and methods of using the same.

Microbial conversion of CO_2 into multiple commodity chemicals, with or without input of H_2. Such chemicals include, but are not limited to, 3-hydroxypropionic acid and succinic acid.

Licensing Information:
The University of Georgia
Contact: Gennaro Gama (GJG@uga.edu, (706)583-8088)
TTO Tracking Number: Cases 1563, 1576, 1889
Patent Status: US applications pending (exclude published appl # 20130102022)
Type of License: Both exclusive and nonexclusive
USPTO Link: http://appft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=0&f=S&l=50&TERM1=Adams&FIELD1=IN&co1=AND&TERM2=Georgia&FIELD2=AS&d=PG01
Website: http://research.uga.edu/gateway/licensing-opportunities/

Funding Opportunity Announcement (FOA)

- FOA
  - Available at the DOE SBIR website or Grants.gov and includes information on
    - Anticipated number of awards and funding available
    - Eligibility
    - Application Requirements
    - Review Criteria
    - Award Administration
  - Open for approximately 9 weeks
- Communications with DOE program managers
  - Open communication permitted to clarify the scope of the topic and subtopic

U.S. DEPARTMENT OF ENERGY

FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

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

FY 2017 Phase I Release 1

Funding Opportunity Number: DE-FOA-0001618
CFDA Number: 81.049

ISSUE DATE: August 15, 2016

LETTER OF INTENT DUE DATE: Tuesday, September 6, 2016, 5:00 PM EDT

PRE-APPLICATION DUE DATE: Not Required

APPLICATION DUE DATE: Monday, October 17, 2016, 11:59 PM EDT

Commercialization

- DOE topics are drafted by program managers who are aware of the technology roadblocks but may not be aware of the commercialization challenges
- Small business applications are expected to address the commercialization challenges and ensure that there is a profitable business opportunity
  - Phase I & II Applications must include Commercialization Plans
- DOE performs follow-up surveys to track commercialization outcomes of its SBIR/STTR awards

Letters of Intent (LOI)

- Requirement
  - You must submit an LOI by the due date to be eligible to submit an application
- Primary purpose
  - begin reviewer assignment to reduce award selection time
  - due 3 weeks after FOA is issued
- Secondary purpose
  - provide email notification to applicants who appear to be non-responsive; you may submit an application if you receive this notification
  - Applicants whose LOI appears responsive will NOT receive a notification
- Limits
  - Small businesses may submit only 10 letters of intent (and 10 applications) per solicitation

Content of LOI
- Title
- Topic and subtopic
- Abstract (<500 words)
  - *Provide sufficient technical detail to enable reviewer assignment*
  - Non-proprietary
- List of collaborators
- Small business information
  - Name, address
  - Business official and contact information
  - Principal investigator

Letter of Intent (LOI) Submission

- Submit LOI online directly to the DOE Portfolio Analysis and Management System (PAMS) website: https://pamspublic.science.energy.gov/.
  - Select "Create New PAMS Account" (if you do not have an account)
  - Submit your abstract as a PDF file
  - Utilize the LOI instructions available at the DOE website to ensure that you submit all the required information
  - For additional details on the LOI submission process, see the Funding Opportunity Announcement

Application Process: Registration

- Applications must be submitted through Grants.gov

- Registration at Grants.gov is a 3 step process
    1. Obtain a DUNS number
    2. Complete a SAM registration.
        - Must be updated annually
    3. Complete Grants.gov registration
        - Start this process as early as possible!

- See the Grants.gov website for instructions

- SBA company registry
    - Small businesses must register at the SBA company registry (http://www.sbir.gov/registration) and submit a copy of their registration with their grants.gov application

Introduction to Grants.gov Video Series
The Introduction to Grants.gov Video Series covers the complete Grants.gov application process, from registering and creating a Grants.gov account to finding funding opportunities and completing an application package.

Applicant Registration for Grants.gov, Part 1
Published on Aug 3, 2015
Learn how to get a DUNS number and register with the System for Award Management (SAM) before you register as an applicant on Grants.gov.

Applicant Registration for Grants.gov, Part 2
Published on Aug 3, 2015
Learn how to complete the Grants.gov registration process after getting a DUNS number and registering with SAM.

Understanding User Roles in Grants.gov
Updated on Feb 18, 2016
Learn about applicant user roles within the Grants.gov system and how these roles impact the application process.

Searching for Funding Opportunities on Grants.gov
Updated on Feb 18, 2016
Learn about Grants.gov's powerful search engine, which allows users to find and apply for federal grants in a variety of ways.

What is in a Grant Opportunity on Grants.gov?
Updated on Feb 18, 2016
Learn about the information that is included with every posting of a federal grant opportunity on Grants.gov.

What's in an Application Package on Grants.gov?
Published on Aug 3, 2015
Learn all you need to know about filling in required fields on downloaded federal grant application packages.

Submitting the Application Package on Grants.gov
Published on Aug 3, 2015
Learn how to submit a completed application package on Grants.gov.

Confirmation Emails from Grants.gov
Published on Aug 3, 2015
Learn about the various confirmation emails users may receive after submitting a grant application through Grants.gov.

U.S. DEPARTMENT OF ENERGY

SBIR/STTR Programs Office

Completing an Application

- Download and complete the application package
  - Available at Grants.gov
  - Can be completed offline

- Important documents to assist you with completing the application package
  - Topics Document, Funding Opportunity Announcement, & Instructions are available at the DOE SBIR/STTR website
  - Online tutorials are available at http://www.doesbirlearning.com/
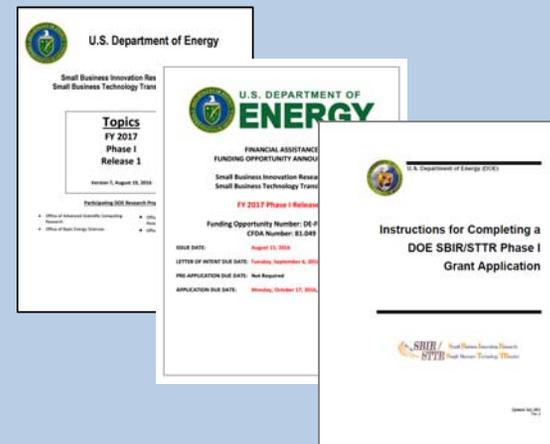
Important Elements of Your Application

- Project Narrative
  - Page and word limits
    - Phase I: 15 pages, 7,500 words
    - Phase II: 20 pages, 10,000 words
- Budget & Budget Justification
- Key Personnel
- Commercialization Plans
  - Phase I commercialization plan (an example can be found [here])
  - Phase II commercialization plan
- SBIR/STTR Information form
- Data Management Plan

Data Management Plan

- Purpose
  - Disseminate, as widely as possible, data generated with public funding
- Requirement
  - All SBIR and STTR applications must select one of the two Data Management Plan (DMP) options below:
- Option 1
  - The Option 1 DMP is: "It is anticipated that all generated digital data will be protected as SBIR/STTR data and therefore will not be publicly shared during the applicable SBIR/STTR data protection period." If any data generated under this award are published, an effort will be made to also release any related digital data that is not protected SBIR/STTR data."
  - _Please note that if you do not include a DMP with your application, Option 1 for the DMP will be assumed for your application. However, If_ you plan to publicly disclose generated digital data, you must provide a DMP under Option 2.
- Option 2
  - If you plan to publicly disclose technical data during the data protection period or, for data not expected to be asserted as protected SBIR/STTR rights data , please submit a DMP use the DMP requirements outlined in the Funding Opportunity Announcement.

Phase 0 Assistance Program

- Goal: increase the number of responsive, high quality proposals from under-represented groups
  - small businesses from states with historically low SBIR/STTR applications to the DOE
    - AK, DC, GA, HI, IA, ID, IN, KS, LA, ME, MN, MS, MT, NC, ND, NE, NY, OK, PA, PR, RI, SC, SD, WA, WI
  - women-owned small businesses
  - minority-owned small businesses

- Services
  - Letter of Intent (LOI) writing assistance
  - Phase I proposal preparation, review and submission assistance
  - Small business development training and mentoring
  - Communication and market research assistance
  - Technology advice and consultation
  - Indirect rate and financial information

- Cost
  - Since this program is entirely funded by the DOE there is no cost to participants
- Website: http://www.dawnbreaker.com/doephase0/.
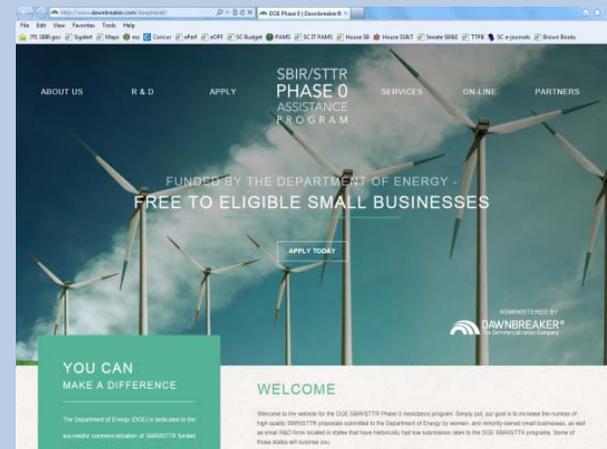
Top 5 Application Errors

- Serious Errors (Applications Ineligible for Review or Administratively Declined)
  - *Failed to update SAM registration early—unable to submit application to Grants.gov by deadline*
  - *Failed to submit a Phase I Commercialization Plan*
    - Submit in Field 12 of the Research & Related : Other Project Information Form
  - *Improper filenames for attachments to grants.gov application*
    - Use only standard characters in file names: A through Z, a through z, 0 through 9, and underscore (_). Do not use any special characters (example: "&", "-", "*", "%", "/", and "#") or spacing in the file name.   Use underscore (example: "My_Attached_File.pdf") for word separation.
- Other Errors (may limit funding eligibility or delay award processing, if recommended for award)
  - *Failed to accurately calculate level of effort (for SBIR and/or STTR)*
    - Use [level of effort worksheet](#) to assist you with the calculation
  - *Failed to properly mark proprietary data*
    - See FOA for instructions

SBIR vs. STTR

- DOE uses the same topics for SBIR & STTR
  - All topics accept SBIR applications; some topics may not accept STTR applications so please check the topic header prior to submission
- Applicants can apply to either or both programs with a single application
  - If you apply to both programs, you must meet the requirements for both

Review and Selection of Applications

- DOE primarily uses external peer review to evaluate your applications
  - Typically at least 3 technical reviewers
  - 1 reviewer for the Phase II commercialization plan
- Review Criteria (equally weighted)
  - Strength of the Scientific/Technical Approach
  - Ability to Carry Out the Project in a Cost Effective Manner
  - Impact
- You will be notified of the decision on your application within 90 days of the application deadline
  - Reviewer comments will be made available to you. Use this feedback constructively to improve future applications

Technical Reviewer Affiliation

Phase I Reviewer Affiliation

Government
10%

Private
Sector
9%

University
32%

National
Laboratory
49%
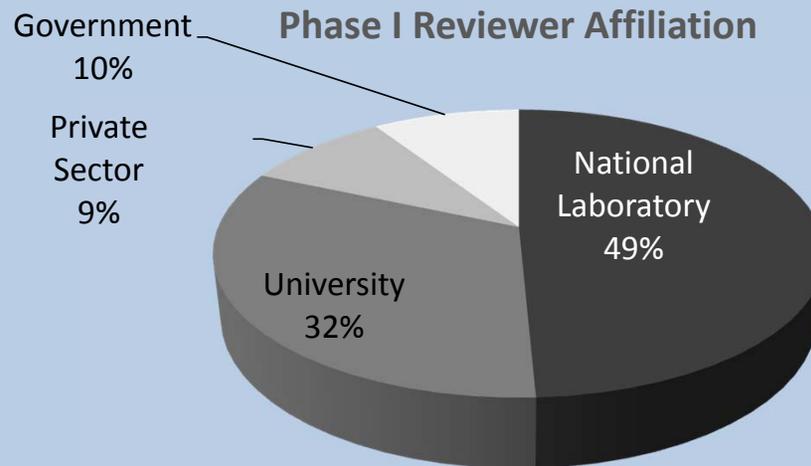
- Reviewers agree that (1) they will keep application information confidential and (2) they do not have a conflict of interest in reviewing the application.

Application & Award Statistics for FY 2016

- Phase I
  - 1556 applications
  - 208 awards

Legend:
- Awarded (21%)
- Recommended for Funding--Not Awarded (13%)
- Not Recommended for Funding (55%)
- Declined without Review (5%)
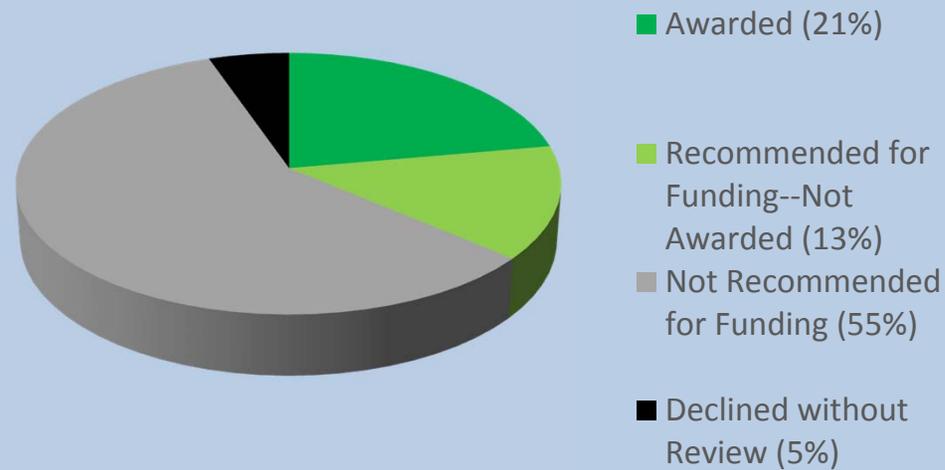
Commercialization Assistance

- DOE Commercialization Assistance
  - Phase I assistance
    - Commercialization Readiness Assessment
    - Focused assistance with development of Phase II commercialization plans
  - Phase II assistance
    - Flexible offerings to meet a variety of commercialization needs
  - http://science.energy.gov/sbir/commercialization-assistance/
- Company-selected commercialization assistance vendor
  - Up to $5000 for Phase I; up to $5000/year in Phase II
  - Companies may select their own vendors to provide commercialization assistance
  - Company must include this vendor as a subcontractor or consultant in their Phase I or II application

Phase I Principal Investigator Meeting

- New For FY 2017!
- All Phase I Principal Investigators are expected to attend the two day DOE SBIR/STTR Principal Investigator Meeting to be held in the DC area
  - Release 1: June 2017
  - Release 2: October 2017
- Objectives
  - In person meetings with DOE program managers and DOE Commercialization Assistance providers
  - Presentations relating to Phase II and Commercialization
  - Small business networking
- You may include the cost (registration, travel) for this trip in your Phase I budget

U.S. DEPARTMENT OF ENERGY | **SBIR/STTR Programs Office**

DOE Office of Inspector General
Fraud, Waste & Abuse

DOE Office of Inspector General
Combating Fraud

- ***What types of fraud are found in the SBIR Program?***
- Application Process
  - submitting a plagiarized proposal
  - providing false information regarding the company, the Principal Investigator (PI), or work to be performed
  - seeking funding for work that has already been completed
- During Award
  - using award funds for personal use or for any use other than the proposed activities
  - submitting plagiarized reports or reports falsely claiming work has been completed
  - claiming results for an award that were funded by a different source

DOE Office of Inspector General
Knowing the Rules

- ***Which SBIR rules should you be particularly familiar with?***
  - Duplicate or overlapping proposals may not be submitted to multiple agencies without full disclosure to all agencies.
  - The company must meet SBA's requirements for a small business, including being majority American owned and have 500 employees or fewer.
  - For SBIR: The PI's primary employment must be with the company during the grant period. The PI may not be employed full time elsewhere.
  - For SBIR: For Phase I, a minimum of two thirds of the research effort must be performed by the grantee company; for Phase II, a minimum of one-half of the research effort must be performed by the grantee company. Work performed by a university research lab is NOT work completed by the grantee company.
  - University employees participating on an SBIR award should disclose their involvement to the university as well as their use of university facilities.
  - R&D must be performed in the United States.

U.S. DEPARTMENT OF ENERGY

SBIR/STTR Programs Office

DOE Office of Inspector General
Consequences

- ***What Happens If You Break the Rules?***
  - If you commit fraud or other wrongdoing in applying for or carrying out an SBIR award, we will investigate.
  - We refer violations of civil or criminal law to the Department of Justice (DOJ). If DOJ prosecutes you for fraud or false statements, you may be sentenced to prison and required to pay full restitution. If DOJ pursues a civil action under the False Claims Act, you may have to pay treble damages and $11,000 for each false claim. In addition, DOE may terminate your awards and debar you from receiving grants or contracts from any federal agency.

Recent Prosecution

Friday, September 11, 2015

Scientists Sentenced To Prison For Defrauding The Small Business Innovation Research Program
Tampa, Florida – U.S. District Judge Virginia Hernandez Covington has sentenced Mahmoud Aldissi (a/k/a Matt) and Anastassia Bogomolova (a/k/a Anastasia) for conspiracy to commit wire fraud, wire fraud, aggravated identity theft, and falsification of records. Aldissi was sentenced to 15 years in federal prison and Bogomolova was sentenced to a term of 13 years. As part of their sentences, the court entered a money judgment in the amount of $10.6 million, representing the proceeds of the crime, and ordered them to pay $10.6 million in restitution. Aldissi and Bogomolova were found guilty on March 20, 2015.

According to testimony and evidence presented during the month-long trial, through their two companies, Fractal Systems, Inc., and Smart Polymers Research Corp., Aldissi and Bogomolova fraudulently obtained approximately $10.5 million of small business research awards from the federal government. In order to be awarded contracts, they submitted proposals using the stolen identities of real people to create false endorsements of and for their proposed contracts. In the proposals, they also lied about their facilities, costs, the principal investigator on some of the contracts, and certifications in the proposals.

https://www.justice.gov/usao-mdfl/pr/scientists-sentenced-prison-defrauding-small-business-innovation-research-program

U.S. DEPARTMENT OF ENERGY | **SBIR/STTR Programs Office**

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DOE Office of Inspector General
Reporting Fraud

- The Department of Energy's Office of Inspector General (OIG) promotes the effective, efficient, and economical operation of DOE's programs and operations through audits, inspections, investigations, and other reviews.

- Within DOE OIG, the Office of Investigations is responsible for investigating any fraudulent acts involving DOE, its contractors or subcontractors, or any crime affecting the programs, operations, Government funds, or employees of those entities.

- ***If you want additional information or to report wrongdoing***

  Internet: ig.energy.gov
  E-mail: ighotline@hq.doe.gov
  Telephone: 202-586-4073
  Hotline: 800-541-1625
  Fax: 202-586-5697

  U.S. DEPARTMENT OF ENERGY
  OFFICE OF INSPECTOR GENERAL
  ATTN: OFFICE OF INSPECTIONS
  1000 INDEPENDENCE AVENUE, SW
  MAIL STOP 5D-031
  WASHINGTON, DC 20585

Questions?

Contact information:

- DOE SBIR/STTR Operations: 301-903-5707

- DOE SBIR/STTR Email: sbir-sttr@science.doe.gov

Our Website:

- DOE SBIR/STTR Website: www.science.energy.gov/sbir

Join our Mailing List:

- DOE SBIR/STTR Mailing List:
  https://public.govdelivery.com/accounts/USDOESCIENCE/subscriber/new

Resources

DOE SBIR webpage
http://science.energy.gov/sbir/

Funding Opportunities

Applicant Resources

DOE Funding Opportunities Tab

Documents and Webinars for Topics and FOAs are posted here

Federal SBIR webpage
sbir.gov

general information for those new to SBIR

Search topics across all federal agencies

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