

EPA Water Technology Innovation Cluster Leaders Meeting

OVERVIEW OF THE SMALL BUSINESS INNOVATION RESEARCH (SBIR) & SMALL BUSINESS TECHNOLOGY TRANSFER PROGRAMS



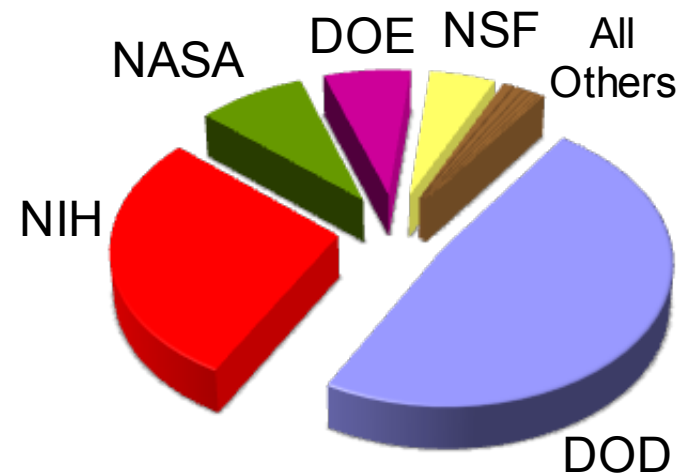
Federal SBIR/STTR Program

- Set-aside program for small businesses to engage in federal R&D
- Promote commercialization
- Budget = % of Federal Extramural R&D Budget
- Approximately \$2.3 Billion
- Information at:
 - <https://www.sbir.gov/>
 - <http://zyn.com/sbir/>

11 Federal Agencies have SBIR Programs

- Department of Defense (DOD)
- Department of Health & Human Services (HHS)
- National Aeronautics & Space Admin (NASA)
- Department of Energy (DOE)
- National Science Foundation (NSF)

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- Department of Homeland Security (DHS)
 - Department of Agriculture (USDA)
 - Department of Commerce (DOC)
 - Department of Transportation (DOT)
 - Department of Education (ED)
 - Environmental Protection Agency (EPA)





SBIR & 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.

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 businesses and research institutions
- Foster technology transfer between small businesses and research institutions

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

3 Phases

- **Award Amount: \$150,000 (guideline), \$225,000 (max.)**
- **Project Duration: 6-12 months**



PHASE II: CONTINUE R/R&D TOWARDS COMMERCIALIZATION

- **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 National Conference

 June 14-17, 2015 | Washington, DC
World Innovation | Conference & Expo

2015
NATIONAL SBIR/STTR
CONFERENCE

2015
NATIONAL INNOVATION
SUMMIT & SHOWCASE

2015
NANOTECH
CONFERENCE & EXPO



- Washington, D.C.
- June 14-17, 2015
- All Agencies Participate
- http://nationalinnovationsummit.com/program/National_SBIR_Conference.html

The Environmental Protection Agency's SBIR Program

April Richards, Program Manager

U.S. EPA Water Technology Innovation Cluster
Leaders Meeting



EPA-SBIR Mission

- EPA: Protect human health and the environment
- EPA SBIR: Support development and commercialization of innovative technologies to meet Agency's mission



EPA SBIR Budget & Awards

- Award Budget ~ \$4.2 M
- Awards contracts
 - Phase I: Proof of Concept
 - \$100,000
 - 6 months
 - Phase II: Develop & Commercialize Technology
 - \$300,000 (+Commercialization Option of \$100,000)
 - 2 years
- EPA provides commercialization support to all Phase I and Phase II Companies



Solicitation



- One solicitation per year
- Next solicitation scheduled for Spring 2015
 - Will be open for ~45 days
- Information at www.epa.gov/ncer/sbir
- Factsheet: <http://www.epa.gov/ncer/sbir/2015factsheet.pdf>

Topic Development

- How we develop topics
 - Input from across EPA
 - National Program Directors (ORD), Office of Water, Regions, Labs
- Topic History (Water)
 - 2012 Water:
 - Drinking Water
 - Wastewater, Stormwater, and Water Reuse
 - The Water Energy Nexus and Climate Change
 - 2013 Water:
 - Drinking Water
 - Wastewater, Stormwater, and Water Reuse

2014 Solicitation Topics (for reference)



- Air and Climate
 - Industrial Process Pollution Reductions
 - Lab-on-a-chip sensors
 - Nano-Air Filters
- Manufacturing
 - Non-toxic electronics
- Toxic Chemicals
 - Non-fluorinated surfaces of coatings
 - Polyurethane Coatings
 - Flame Retardant Materials
- Water
 - Nutrient Recovery
 - Small Drinking Water Systems



- Building Materials
 - Innovative Construction Materials
 - Material Reuse and Recycling
- Food Waste
 - Resource Recovery
- Homeland Security
 - Pathogen Removal from Water Pipes

New Electronic Submission System

- Now using FedConnect for electronic submissions
- Please start early to register your company with FedConnect
- Register at: www.fedconnect.net/FedConnect/



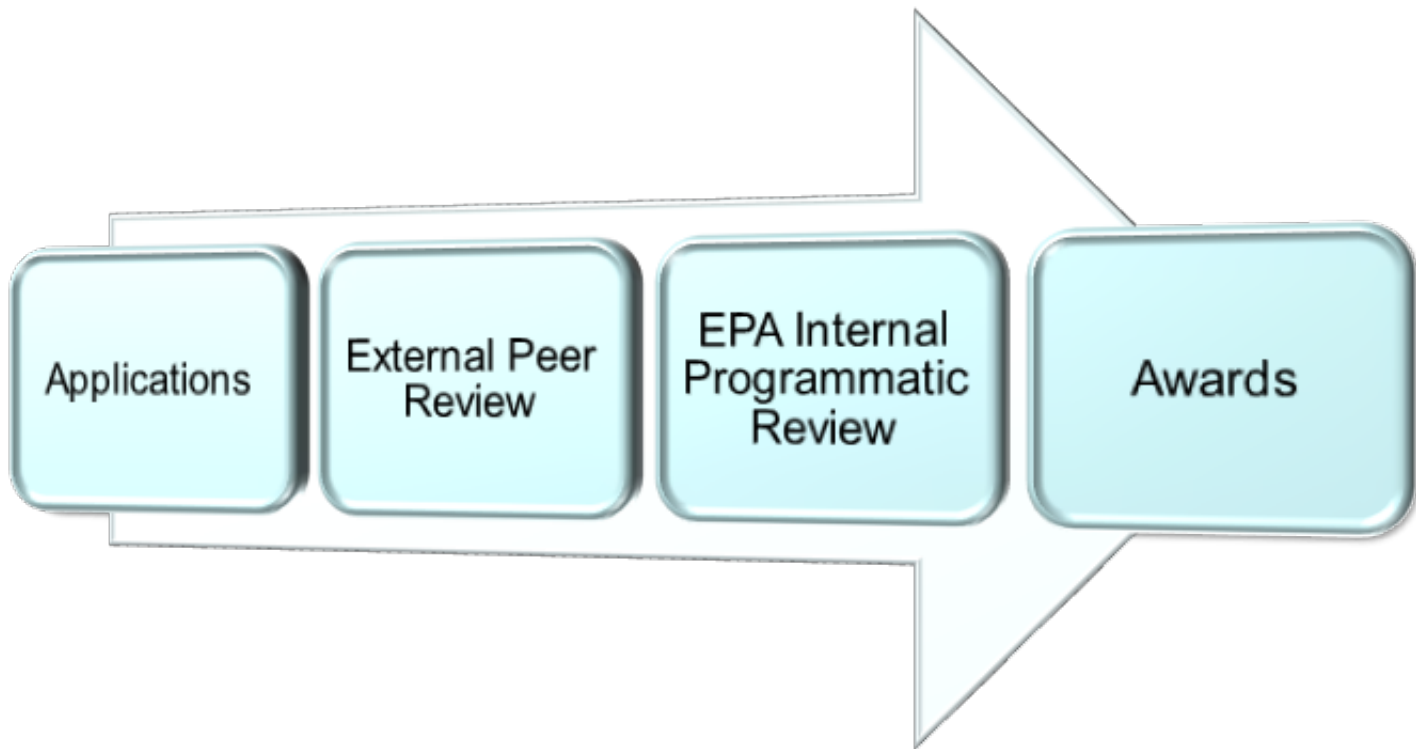
FedConnect[®]
The Government Acquisition & Grants Portal



Required Registrations

- [Dun and Bradstreet Universal Numbering System \(DUNS\)](#) - All registrations require that applicants be issued a DUNS number. After obtaining a DUNS number, applicants can begin both SAM, and SBA Company registry. The same DUNS number must be used for all registrations, as well as on the proposal.
- [SBA Company Registry](#) – **New requirement.** See solicitation for instructions on how to register and how to attach proof of registration to your proposal package. Applicants must have a DUNS number to complete this registration. SBA Company registration is **NOT** required before SAM.
- [System for Award Management \(SAM\)](#) (formerly CCR) – Applicants must complete and maintain an active registration, **which requires renewal at least annually.** The renewal process may require as much time as the initial registration.
- [FedConnect](#)– **New process.** Electronic applications system for EPA SBIR. FedConnect is a web portal that connects agencies and vendors to streamline the process of doing business with the federal government.

Proposal Evaluation and Selection



EPA External Peer Review (Phase I)

- Ratings:
 - Excellent, Very Good, Good, Fair, Poor
- Five Criteria:
 - Disruptive Potential
 - Management and Technical Capabilities
 - Life Cycle (environmental) Impacts
 - Technical Soundness
 - Commercialization Potential

EPA Internal Relevancy Review

- Review only proposals rated “Excellent” and “Very Good”
- Three Criteria:
 - EPA Needs and Program Priorities
 - Significant Environmental Benefits (Sustainability)
 - Broad Application and Impact

Submitting a Successful Proposal

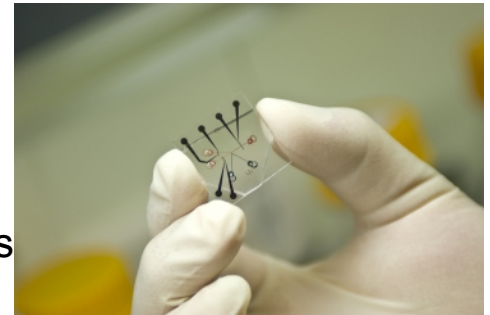
- Read solicitation carefully
- Put together an effective team (technical & business expertise)
- Develop a quality proposal which
 - has a strong abstract
 - has a realistic work plan
 - addresses evaluation criteria
 - quantifies environmental benefits
 - demonstrates innovation, is a “game changer”
 - shows potential for commercialization
 - addresses cost, end-users/markets
 - Identifies partners.....



Success Stories - Water

Funded water-related technologies in collaboration with the water cluster

- *Okeanos- Cost Effective Seawater Desalination with FICP Element Arrays*
 - innovative clean-energy microdevice (WaterChip™), which uses microchannels, micro/nanoelectrodes to desalinate water more efficiently than current technologies
 - employs an electrochemical phenomena only observable in nanoscale called Faradaic Ion Concentration Polarization (FICP).



- *Cambrian Innovation-Energy Efficient Ethanol Stillage Treatment using a Bio-Electrochemical System*
 - “BioVolt”, a self-powered wastewater treatment system that generates pure electricity



Program Highlights

- Small program with important mission – saving the planet
- Want our companies to succeed commercially
 - Provide commercialization support to all Phase I and Phase II companies
 - Help communicate success through website, social media
 - Make connections within and outside of EPA



For More Information...

- EPA SBIR website: www.epa.gov/ncer/sbir
- Government Wide Program: www.sbir.gov
- Contact information:
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