



# *DOE SBIR/STTR Programs Update*

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*August 9, 2018*

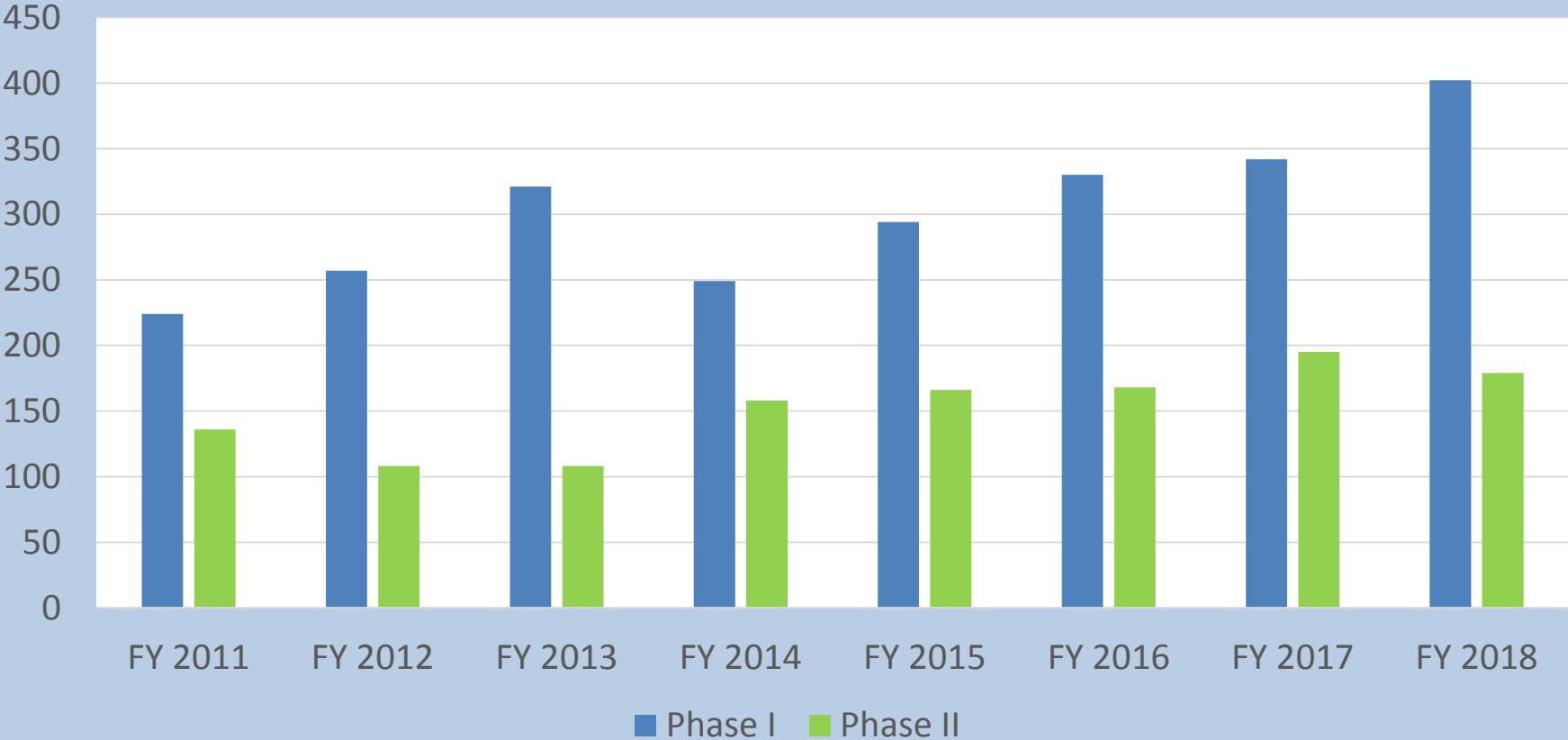


U.S. DEPARTMENT OF  
**ENERGY**

SBIR/STTR Programs  
Office

# DOE SBIR/STTR Awards


- The budget of the DOE SBIR/STTR Programs have grown approximately 70% since 2011



# Phase III Success Stories

- 21 profiles available on our website
  - <https://science.energy.gov/sbir/sbir-sttr-success-stories/>
  - Provides examples of the varied routes taken by awardees to commercialize their innovations
- Cover a broad spectrum of DOE programs

**DOE SBIR/STTR Success**



**SKUTEK INSTRUMENTATION**

Skutek produces high precision digital instruments with up to 40 channels for high-density data acquisition systems.

**PHASE III SUCCESS**  
 Skutek had an exciting and unusual beginning as a company, which perhaps is not surprising in the world of experimental physics startups. It was founded in 2000 by Wojtek Skulski and his wife Joanna while Dr. Skulski was working at the University of Rochester on the PHOBOS experiment, carried out at the Relativistic Heavy Ion Collider (RHIC) located at Brookhaven National Laboratory (BNL). PHOBOS, an experiment devised to search for the formation of Quark-Gluon Plasma (QGP) recreating the scenario that occurred at about a micro-second after the Big Bang, was in need of a critical upgrade to improve the time-of-flight resolution, which is a critical parameter in discriminating elementary particles of different mass.

**FACTS**  
 PHASE III SUCCESS  
 Skutek, Inc. completed a Phase III SBIR award, totaling \$250,000. Skutek has received a total of \$1.2M in SBIR awards and \$1.7M in SBIR awards in order.  
 IMPACT  
 Skutek's U.S. multichannel digitizers address a need for compact, high-fidelity data acquisition for the research production of experiments in both nuclear and high energy physics.  
 DOE PROGRAM  
 Nuclear Physics (NP).

**DOE SBIR/STTR Success**



**ADELPHI TECHNOLOGY INC.**

Over the course of its 20 years of operation, Adelphi Technology, Inc. has pioneered and perfected the design and production of state of the art, compact, and safe neutron generators. The production of a neutron beam might seem like an activity strictly reserved to a few government and regional sponsored facilities and not something to be manufactured in series. That is precisely what makes Adelphi special. Thanks to their impressive technical ability, Adelphi's scientists have been able to shrink neutron generators to the point of making this technology available to modest-sized research laboratories and businesses, opening up an entire class of applications impossible before.

**FACTS**  
 PHASE III SUCCESS  
 20 customized neutron generators sold for a revenue of \$4 million.  
 3 R&D100 Awards  
 Reached a total revenue of \$2M/year in 2017.  
 IMPACT  
 High flux, compact neutron generators are an economical and practical replacement for expensive research reactor or regional beamlines.  
 DOE OFFICES  
 Office of Basic Energy Sciences (BES), Office of Nuclear Energy (NE), Office of Nuclear Physics (NP).

**DOE SBIR/STTR Success**



**SILICON AUDIO LLC.**

Photo by Meghan Murphy, reproduced with permission from the Anchorage Daily News

...and Alaska, an engineer with...  
 ...in Alaska the use of...  
 ...in Europe.

**PHASE III SUCCESS**  
 Silicon Audio was included in the U.S. Geological Survey's required equipment list. Sales to repeat customers have doubled each year since 2013 and planned for the near future. A single investment of \$1.2M supported early product development.

**IMPACT**  
 Silicon Audio's special seismic sensor offers unprecedented accuracy in the analysis of any seismic event or nuclear explosion, with reduced costs and superior performance.

**DOE OFFICE/PROGRAM**  
 National Nuclear Security Administration (NNSA), Office of Nuclear Detection.

**DOE SBIR/STTR SUCCESS**



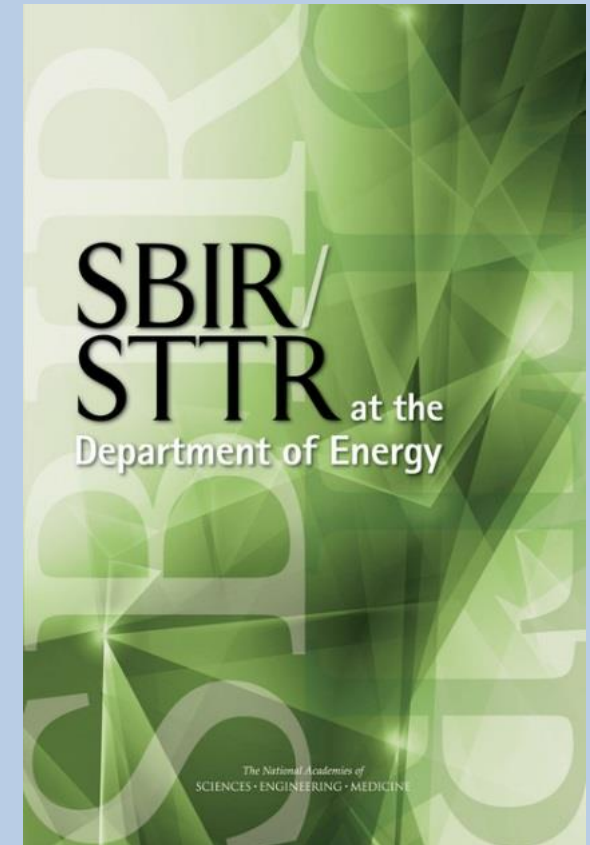
**RADIATION MONITORING DEVICES INC.**

Based in Watertown MA, Radiation Monitoring Devices, Inc. (RMD) was founded in 1974 and, since 2008, has operated as a subsidiary of Dynasil Corporation of America, serving as the incubator for new product innovations. From its early days, RMD's mission has been twofold: 1) perform world-class research and, 2) transition technologies from research to commercial products. To meet these objectives, RMD adopts a variety of commercialization strategies, depending on the particular technology and the most appropriate business model. RMD performs R&D in an impressive range of scientific fields, from space science to particle physics, and from nuclear security and safeguard to clinical diagnoses and environmental research. Within these areas, RMD develops advanced functional materials, instrumentation, electronics, and software for imaging and augmented reality.

**FACTS**  
 PHASE III SUCCESS  
 RMD launched a novel scintillation material, CLIC, in October 2014. CLIC led to a variety of radiation detection instruments including Spectroscopic Portable Radiation Detection Instruments (SPRDI), CLIC crystal detector tubes are currently at more than 5 TMR/year and are expected to increase considerably in the coming year's.  
 IMPACT  
 With their nuclear and gamma ray detectors, CLIC provides an uniquely flexible tool for nuclear events and first responders and for monitoring unauthorized nuclear material.  
 DOE OFFICES  
 Defense Nuclear Nonproliferation (DNN), Nuclear Physics (NP), Nuclear Energy (NE).

# National Academies Assessment

- Next Assessment underway
  - Report to be delivered to Congress December 31, 2019
  - More data intensive effort looking at economic impact of SBIR/STTR awards on small businesses
    - Job creation, innovation, revenue growth
- Previous study available online
  - <https://www.nap.edu/catalog/23406/sbirsttr-at-the-department-of-energy>



# Pending SBIR/STTR Legislation

- FY 2019 National Defense Authorization Act
  - Has passed House and Senate, awaiting President's signature
  - Some important SBIR/STTR provisions for DOE
    - Reauthorized Administrative funding pilot program
      - Allows DOE to restart its Phase 0 Assistance program for under-represented groups and continue our Phase I Principal Investigator meetings
    - Increases funding available for commercialization assistance
      - Phase I: \$5000 to \$6500
      - Phase II: \$5000/year to \$50,000 per project
    - Mandates that agencies issue a third Phase II award
      - Applicants must have received an initial Phase II and a second Phase II (IIA or IIB)
      - Applicants are required to have 1:1 matching funds



# Questions?