

U.S. Department of Energy

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





Outline for the Presentation

1. SBIR/STTR Basic Information
2. How to Submit Proposals to the DOE
3. How DOE Evaluates Proposals
4. How DOE Promotes Commercialization



1. SBIR/STTR Basic Information

- SBIR/STTR Program Features
- Three-Phase Programs
- Level-of-Effort Requirements
- Implications for Research Institutions
- Advantages of Collaboration



Small Business Innovation Research (SBIR) - 2.5% **Small Business Technology TRansfer (STTR) - 0.3%**

- Small businesses compete for research grants/contracts in response to technical topics in annual solicitations from 11 Federal agencies.
- Small businesses retain rights to technology, go on to commercialize products/services.
- SBIR, STTR very similar except in STTR the small business must collaborate with a non-profit Research Institution.
- Over \$2 billion available annually, government wide; over \$100 million at the DOE.



Three-Phase Programs

- **Phase I: Feasibility of Idea**
 - 9 month duration, up to \$100,000 each
 - Odds of winning: approximately 5-to-1
- **Phase II: Principal R&D Effort**
 - 2 years, up to \$750,000 each
 - Odds of winning: 2-to-1 to 3-to-1
 - Only DOE Phase I awardees may apply
- **Phase III: Commercialization**
 - Private sector funding
 - Gov't can continue R&D, but no SBIR/STTR funds



Level-of-Effort Requirements

	Small Business	Research Institution	Other Consultants/ Subcontractors
SBIR	Min. 66% for Phase I Min. 50% for Phase II	Participation optional	Participation optional
STTR	Min. 40% in Phases I and II	Min. 30% for Phases I and II	Participation optional



Implications for Research Institutions

Maximum dollars available per project:

	<u>Ph I</u>	<u>Ph II</u>	<u>Total</u>
■ SBIR	33K	375K	408K
■ STTR	60K	450K	510K

Plus potential commercialization royalties



Advantages of Collaboration

- Enhanced credibility may increase chances of winning.
- Opportunity for proposal review before submission.
- Opportunity for research ideas to originate in the research institution.
- At some research institutions, the researcher can take a leave of absence to work on an SBIR/STTR project.



Solicitation Topics Relate to DOE's Strategic Goals

- **Energy:** Promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy.
- **Science:** Providing world-class scientific research capacity and advancing scientific knowledge.
- **Environment:** Protecting the environment.
- **Defense:** Protecting our national security using advanced science and nuclear technology.



SBIR/STTR – DOE Annual Schedule

Release of Solicitation	September / October
Submission deadline	November/December
Selection (Phase I)	April / May
Grant start date	June / July



Accessing Solicitation

www.science.doe.gov/sbir

Also on website:

- Award winners and project abstracts of winning proposals
- SBIR/STTR statistics
- Instructions for submitting Phase II proposals
- Success stories / Accomplishments
- National Laboratory Contacts
- Information for Active Grantees



Electronic Submission

DOE accepts grant applications in electronic format only.

- 1) Follow submission instructions in Program Solicitation
- 2) Obtain DUNS #
 - 1-866-705-5711
- 3) Apply through Grants.gov
 - <http://www.grants.gov>
- 4) To receive grant, register in Central Contractor Registration
 - <http://www.ccr.gov/>



Administrative Screening

- Does applicant meet minimal requirements? See Application Checklist in Program Solicitation.
- Small number of administrative declines. Read *carefully*!



First Step Technical Review

Reasons for First-Step Declination:

- Not responsive to a technical topic and subtopic
- Compared to the competition, the overall quality of proposal (with respect to the evaluation criteria) is such that the chances of winning an award are slim
- Duplicates work already funded
- Insufficient information for full technical review
- Neither research nor research and development



External Peer Review

■ Reviewer selection

- Based on proposal itself
- Most from national laboratories, universities

■ Evaluation criteria

- Strength of the scientific/technical approach
- Ability to carry out the project
- Impact



Phases I & II Evaluation Criteria

Scientific/Technical Approach

- Strength and innovativeness of the idea and the approach
- Significance of scientific or technical challenge
- Thoroughness of the presentation



Phases I & II Evaluation Criteria

Ability to Carry out the Project in a Cost-Effective Manner

- Qualifications of the PI, other key staff, consultants, and the adequacy of equipment and facilities
- Soundness and adequacy of work plan to show progress toward proving feasibility
- Degree to which Phase I has proven feasibility (Phase II only)
- Degree to which the DOE investment would be justified by the proposed effort



Phases I & II Evaluation Criteria

Impact

- Significance of technical/economic benefits
- Likelihood work will lead to marketable product or process
- Likelihood project could attract further development funding after project ends



Phase II only Evaluation Criteria

Commercial Potential

- 1/2 of Impact criterion score
- Applicant's record of commercializing SBIR, STTR, or other research
- Phase II funding commitments from private sector or non-SBIR/STTR funding sources
- Phase III follow-on funding commitments



Scoring, Ranking, Selecting

- Based on peer reviewer evaluations, DOE Topic Managers rate each proposal
- Proposals are candidates for funding if:
 - Strong endorsement on at least two criteria
 - No reservations on any criterion
- DOE program areas rank candidates for funding and make selections
 - Proposals compete within DOE technical program areas



Debriefings

- Written reviewer comments automatically sent to awardees.
- Written evaluation comments sent upon request to non-awardees that request a debriefing within 30 days after notification.



4. How DOE Promotes Commercialization

- Information and success stories gathered from Phase II awardees
- Commercialization Assistance



Commercialization Assistance

- Assistance with market research and business planning
- Identification of potential partners and investors
- Guidance in developing materials and presentations for potential investors.
- Participation in Commercialization Forum—awardees make presentations to venture capitalists and large company representatives.



DOE SBIR/STTR Program Contact Information

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BACKUP SLIDES

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Meeting Goals through Technical Topics

- **Energy**
 - **Energy Production**
 - **Current: Fossil and Nuclear Energy**
 - **Future: Fusion and Renewable Energy**
 - **Energy Efficiency**
 - **Transportation**
 - **Buildings**
 - **Industry**
- **Science**
 - **Materials Sciences**
 - **Life Sciences**
 - **High Energy and Nuclear Physics**
 - **Data Management and Communications**



Meeting Goals through Technical Topics (continued)

- **Environment**
 - Environmental Sciences
 - Environmental Management
- **Defense**
 - Non-proliferation of WMD



DELETED SLIDES

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2. How to Submit Proposals to the DOE

- Solicitations
- Technical Topics
- Schedule
- Electronic Submission



3. How DOE Evaluates Proposals

- **Administrative Screening**
- First Step Technical Review
- External Peer Review
- Scoring, Ranking, Selecting
- Debriefings



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Evaluation Process

- Administrative Screening
- First Step Technical Review
- **External Peer Review**
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- **Debriefings**