

SMALL BUSINESS INNOVATION RESEARCH SMALL BUSINESS TECHNOLOGY TRANSFER

SBIR-STTR and NETL

The U.S. Dept. of Energy's Office of Fossil Energy manages the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) Programs through the National Energy Technology Laboratory (NETL). SBIR and STTR are U. S. government programs in which federal agencies with large research and development budgets allocate a small percentage of their funding for competitions among small businesses. Congress established the SBIR and STTR programs in 1982 to support scientific excellence and technological innovation through the investment of these federal research funds in critical American priorities to build a strong national economy.



SBIR · STTR
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Mikro Systems Ceramic Core
Developed under a Fossil Energy SBIR Award Managed by NETL
Image courtesy of Mikro Systems, Inc

NETL

NATIONAL ENERGY TECHNOLOGY LABORATORY

HOW DOES IT WORK

Each year the Department of Energy (DOE) issues Funding Opportunity Announcements (FOAs), inviting small businesses to apply for SBIR/STTR grants. The NETL's Office of Fossil Energy (FE) has historically leveraged its participation in DOE's SBIR/STTR Program by directing its involvement in two mission objectives. One objective has promoted research from small businesses in the area of clean coal and carbon management. The other has focused on oil and natural gas technologies. While these initiatives continue in the near-term, NETL is looking to the future with a responsible transition to enhanced reliance on renewable energy.

DOE's main SBIR Office organizes the solicitation of applications for grants into two distinct activity periods: Release 1 and Release 2. Release 1 includes topics in the areas of Basic Science and Engineering and Nuclear Security. Release 2 includes topics in the areas of Clean Energy and Environmental Management. The Office of Fossil Energy's Topics are included in Release 2, under Clean Energy. The SBIR/STTR Programs were extended through September 30, 2022 (by Public Law 114-328) keeping the previous percentage from total external research budget at 3.2% for SBIR awards and 0.45% for STTR awards. The total allocation for Fossil Energy is approximately \$14 million for both Phase I and II awards.

SBIR AND STTR DISTINCT PHASES

- Phase I explores the feasibility of innovative concepts with awards of \$250,000 for up to 12 months.
- Initial Phase II is the principal R&D effort where the innovative concept is prototyped with awards of \$1,600,000 over a two-year period. No letter of intent is required.
- Sequential Phase II awards are available to completed initial Phase II projects and is comprised of either a Phase IIA or a Phase IIB award. Award size and duration for sequential Phase IIA or Phase IIB are \$1,500,000 for up to 2 years.
- The Phase IIC award will be used to continue research on the path to commercialization, but it requires matching funds from an industry partner. Funds cannot be provided by the awardee.
- Phase IIA is an award to be used to continue R&D within the scope of the original prototype/process R&D. Program offices recommend topics/subtopics among the Phase II awardees from two years prior to the current fiscal year. Applicants may only apply to those specific topics listed and must have completed the entire initial Phase II project. A letter of intent is also required.
- Phase IIB is an award to be used to continue R&D beyond the scope of the original prototype/process R&D in preparation for commercialization. The applicant submits a letter of intent when the FOA is issued. Their topic needs not be listed on the FOA. Initial Phase II awardees from two and three years prior to the current fiscal year are eligible to apply.
- Though Phase III is officially part of the SBIR/STTR programs, non-SBIR/STTR funding is used for small businesses to pursue COMMERCIAL APPLICATIONS of their R&D. Under Phase III, as with other Federal agencies, DOE may award non-SBIR/STTR funded, follow-on awards for products or processes that meet the mission needs of its funding programs. The small business may also pursue private funding and carry on the project under SBIR/STTR guidelines for intellectual property / data protection, reporting requirements, etc.

SBIR AND STTR TOPICS FOR FOSSIL ENERGY

Introductions to recent Topic descriptions (Topics/Subtopics vary from year to year).

TOPIC I: CLEAN COAL AND CARBON MANAGEMENT

In the near future, coal will continue to play an important role in powering the nation's electricity generation, especially for baseload power plants. However, significant R&D is currently being pursued for innovative technologies focused on finding new ways to generate power from coal in a more environmentally friendly manner, and to augment coal and gas with renewable energy resources. Also of interest are the following initiatives: the recovery of rare earth elements and critical materials; the complete use of all parts of coal under the Advanced Coal Processing Program; and innovative technologies for energy storage

TOPIC II: OIL AND NATURAL GAS TECHNOLOGIES

The dramatic increase in domestic natural gas production from shale source rocks is in large part due to the combination of large volume, multistage hydraulic fracturing and horizontal drilling technologies. There is interest in R&D related to the development of novel technologies that will improve the ability to understand much more precisely the dimensions orientation, and the conductivity and distribution of created hydraulic fractures. Also of interest are ways to improve the ability to inspect, monitor and repair natural gas pipelines.

DOE'S SBIR-STTR PROGRAM TYPICAL SCHEDULE

SBIR-STTR FUNDING OPPORTUNITY ANNOUNCEMENTS (FOAS)				
	Phase I		Phase II (Initial and Sequential)	
	Release 1	Release 2	Release 1	Release 2
Topics Issued	Mid-July	Late October	N/A	N/A
FOA Issued	Mid-August	Late November	Late October	Mid-February
Letters of Intent	Early September	Mid-December	Mid-November	Mid-March
Applications Due	Mid-October	Early February	Mid-December	Early April
Award Notification	Early January	Late April	Late February	Mid-June
Grant Start Date	Mid-February	Early June	Early April	Late July

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