

Office of Coal FY 2026-27 SBIR/STTR Additional Information

The Office of Coal is seeking high-impact, innovative proposals for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs that help support program goals and lead technology towards commercialization. The information below is meant to provide additional guidance to applicants on topics that are of particular interest to the Office of Coal this year and are not meant to limit the potential topics for applications, except where explicitly stated as such.

Advances in Coal Mining and Processing Technologies

The Office is interested in novel technologies to improve the cost effectiveness of coal mining and processing, especially ones that improve coal production while reducing the environmental footprint and health and safety risks associated with mining and processing, use less water resources, and/or use less energy. Additionally, technologies that help produce additional revenue streams from the mining and processing of coal, while improving the overall economics of the coal recovery and beneficial use.

Advances in Coal Conversion and Products

The Office is interested in novel technologies to stabilize, optimize, and grow the American coal industry. To achieve this, HGEO seeks novel processing and conversion methods that transform coal into advanced materials and high-value products—such as graphite, specialized building materials, and carbon nanomaterials—helping to position coal as a flexible, economically viable cornerstone of modern manufacturing.

Multipollutant Capture Systems for Coal Electric Generation Facilities

The Office is interested in cost-effective, highly efficient multipollutant capture systems for coal-fired power generation facilities. Proposed systems must target the removal of at least two of the following flue gas constituents (SO_x, NO_x, particulate matter, or Hg). The primary objective is to either achieve current emissions reduction at a lower cost than state-of-the-art (SOTA) systems, or deliver superior emission reductions at costs equal to or below SOTA systems. Pre-combustion fuel treatments that successfully reduce emissions are also of interest.

Applicants should demonstrate a deep understanding of current SOTA emission control systems, including their performance metrics, cost structures, chemistry, and their ability to meet stringent environmental standards.

Revenue Generation from Coal-Fired Power Plant Waste Streams

The Office is interested in technologies capable of providing additional revenue streams for existing coal electric generation facilities through the valuation of alternate co-products that are not currently available. Opportunities of interest include technologies that improve the cost effectiveness of coal production and use by developing marketable co-products from wastewater streams, flue gas constituents, and/or coal combustion residuals (fly ash, bottom ash, and boiler slag).

The best applications will demonstrate the applicant's knowledge of the systems creating the by-products, the volumes available for processing, and the market size and value for the new co-product produced through the applicant's technology.

R&D for Advanced Coal Electric Generation Technologies

The Office is interested in advanced coal combustion technologies to enable alternative, highly efficient designs for next-generation coal-fired power plants. Proposed systems of interest should be capable of achieving a net overall plant efficiency exceeding 45% (HHV) at full load.

Designs of interest include small, modular facilities designed for flexible operations, potentially integrating thermal or energy storage systems and digital assets to achieve target capacity factors above 90%. To ensure economic viability, designs should also explore converting plant waste streams into valuable co-products, such as capturing CO₂ for enhanced oil recovery (EOR) at a cost of less than \$40/tonne.

Applicable technology pathways include, but are not limited to, advanced oxy-combustion, chemical looping combustion, and advanced ultra-supercritical (AUSC) power cycles.