

Welcome to the Webinar

NETL Webinar on FE's Minority Serving Institutions Program



Maria Reidpath

Project Manager, Enabling Technologies and Partnerships



December 2, 2020
HBCU-OMIFE Webinar

Welcome and Introductions



- The objective of this Webinar is to assist officials at Minority Serving Institutions (MSIs) by
 - Increasing awareness of NETL's **Historically Black Colleges and Universities and Other Minority Institutions (HBCU/OMI)** Program and its available opportunities
 - Presenting the context for these opportunities: NETL's Mission and Priorities in general and of Crosscutting Research in particular
 - Reviewing NETL's engagement with MSIs and its purpose
 - Briefing participants on the intricacies of doing business with the Federal Government and how to effectively respond to NETL Funding Opportunity Announcements (FOAs)

Welcome and Introductions



- This **Webinar is being recorded and will be posted** (in 7-10 days) on NETL Website: www.netl.doe.gov. Go to the “News and Events” tab on the upper right-hand side and click “Conference Proceedings”.
- If you are using computer audio, you may experience audio issues depending on your internet connection speed. To avoid this, **we recommend the phone call option**.
- Your telephones are muted and we will not be able to hear your questions, so **please use the chat/question box that came up when you logged onto GoToWebinar for your questions**. All questions will be answered, time-permitting, after all the presentations have been made.
- Questions that are not answered during the Webinar will be posted, along with the answers, at the same location as the Webinar recording.

Goals of NETL's HBCU-OMI Program



- To reach the intended population – i.e. U.S. minority students.
- For minority students to **benefit from high-quality learning experiences** by participating in research activities that impact the Nation and potentially, the World.
- For minority students to have the **opportunity to present project progress reports and final results at professional venues** thus gaining valuable exposure and experience.
- For faculty Principal Investigators to **use the research project(s) as teaching tool** for minority students.

Agenda

1. Welcome and Introductions

Maria Reidpath, Federal Project Manager,
Enabling Technologies and Partnerships

2. Overview of NETL's University Training & Research Program

Sydni Credle, Technology Manager,
University Training & Research

3. Doing Business with the Federal Government and Funding Opportunity Announcements (FOAs)

Bethan Young, Contract Specialist,
Financial Assistance

4. Responding to the Areas of Interest (or Topics)

Mark Render, Federal Project Manager,
Enabling Technologies and Partnerships

5. Questions and Answers

Questions?

VISIT US AT: www.NETL.DOE.gov



@NETL_DOE



@NETL_DOE



@NationalEnergyTechnologyLaboratory

CONTACT:

Sydni Credle, Ph.D., P.E.

Technology Manager, University Training and Research

304-285-5255

sydni.credle@netl.doe.gov

Maria Reidpath

Project Manager, Enabling Technologies and Partnerships

304-285-4140

maria.reidpath@netl.doe.gov



University Training and Research

Sydni Credle
Technology Manager



December 2, 2020
HBCU-OMIFE Webinar

MISSION

Discover, integrate and mature technology solutions to enhance the Nation's energy foundation and protect the environment for future generations

- **Effective Resource Development**
- **Efficient Energy Conversion**
- **Environmental Sustainability**

VISION

Be the Nation's renowned fossil-energy science and engineering resource, delivering world-class technology solutions today and tomorrow

- **Technology Convener**
- **Knowledge and Technology Generation Center**
- **Responsible Steward**



U.S. DEPARTMENT OF
ENERGY



NATIONAL
ENERGY
TECHNOLOGY
LABORATORY

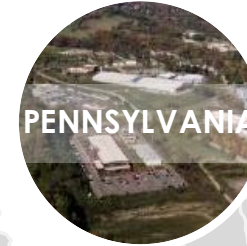
Research Focus by Site

Multiple Sites Operating as 1 LAB System



OREGON

- Materials Performance
- Alloy Development/Manufacture
- Geospatial Data Analysis



PENNSYLVANIA

- Process Systems Engineering
- Decision Science
- Functional Materials
- Environmental Sciences



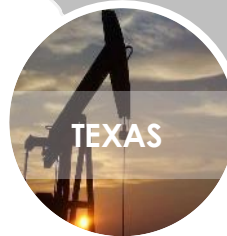
WEST VIRGINIA

- Energy Conversion Devices
- Simulation-Based Engineering
- In-Situ Materials Characterization
- Supercomputer Infrastructure



ALASKA

Oil and Gas
Strategic Office



TEXAS

Oil and Gas
Strategic Office

NETL Snapshot

By the Numbers

3 labs across U.S.

900+ R&D projects in **50** states

\$6.3B total award value

\$1.1B FY20 budget

Workforce

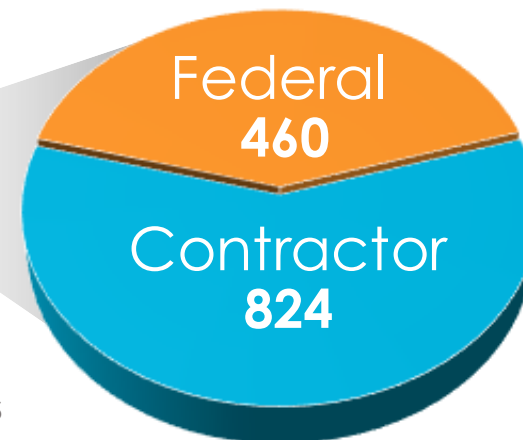
1,284 Full Time Equivalent Employees (FTEs)

34 Joint Faculty

74 Postdoctoral Researchers

46 Graduate Students

11 Undergraduate Students



NETL manages & implements an array of activities for multifaceted R&D programs

- Program planning, development, and execution
- Legal, Financial, Procurement and Head of Contracting Authority (HCA)
- Project Management Expertise

NETL Budget

FY2020 Budget \$1.1B

Coal Program

Carbon Capture	\$118M
Carbon Storage	\$100M
Adv. Energy Systems	\$120M
Crosscutting	\$ 56M
NETL Coal R&D	\$ 38M
Rare Earth Elements	\$ 23M
STEP	\$ 16M
Transform. Coal Pilots	\$ 20M

Oil & Gas Program

Natural Gas Tech.	\$ 51M
Unconvent. FE Tech.	\$ 46M

FE Program Support

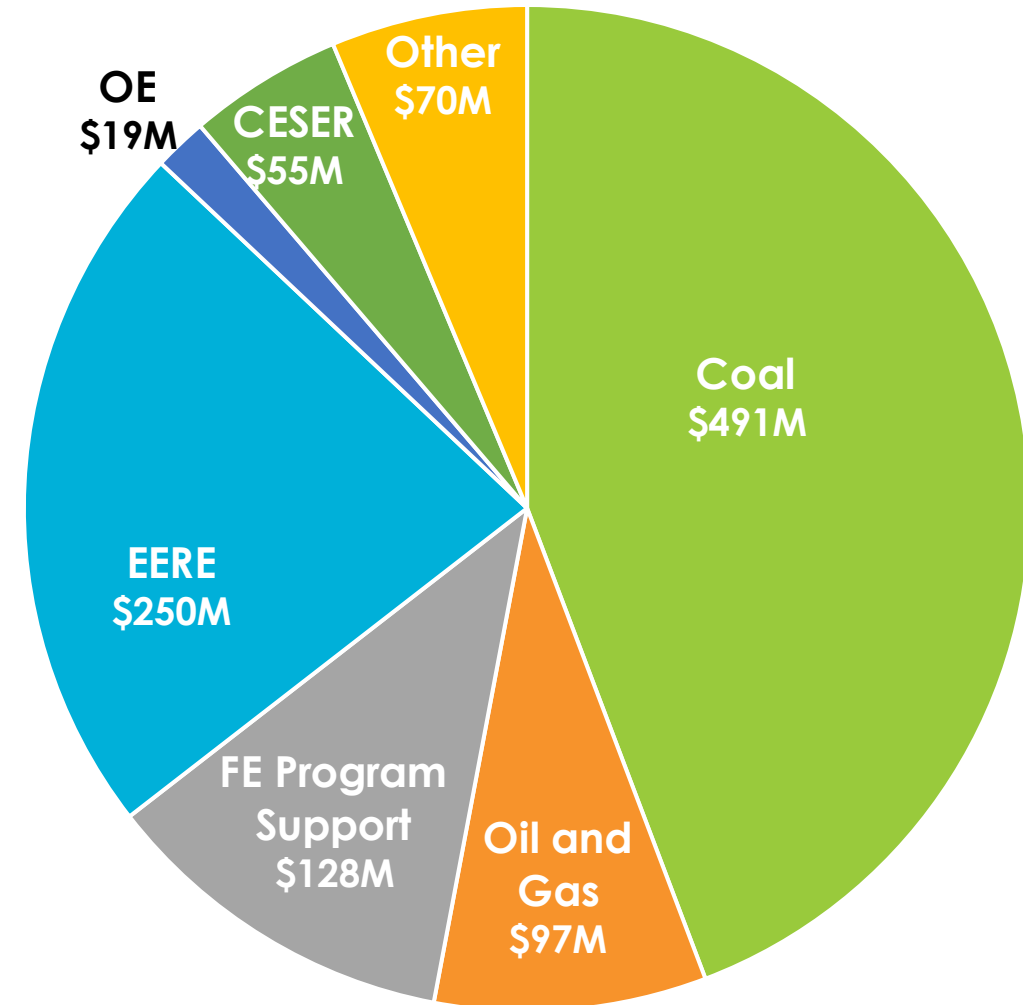
Program Direction	\$ 28M
NETL Research & Ops.	\$ 50M
NETL Infrastructure	\$ 50M

Non-Fossil Programs

EERE	\$250M
OE	\$ 19M
CESER	\$ 55M

Strategic Partnerships

Other	\$ 70M
-------	--------



Coal Technology Thrusts

Advanced Energy Systems

- Transformative Power Generation
- Advanced Combustion & Gasification
- Solid Oxide Fuel Cells & Gas Turbines
- Coal Beneficiation



Carbon Capture

- Pre- & Post-Combustion Capture Systems
- Solvents, Sorbents & Membranes



Carbon Storage

- Long-Term Storage Monitoring, Verification, Accounting & Assessment
- Demonstrate Storage Infrastructure
- Carbon Use & Reuse



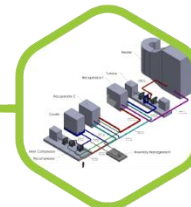
Crosscutting Research

- High-Performance Materials
- Sensors & Controls
- Simulation-Based Engineering
- Water Management
- Energy Storage
- **University Training & Research**



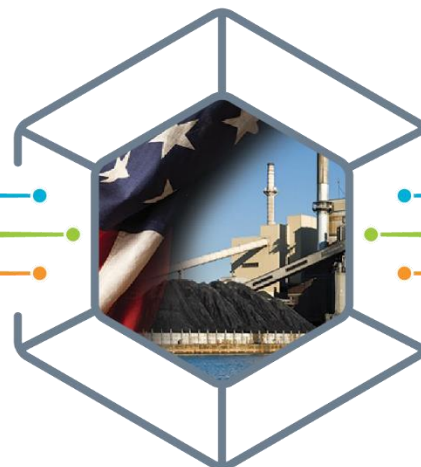
STEP (Supercritical CO₂)

- High-Efficiency Power Cycle
- Reduced Water Consumption & Air Emissions
- Reduced Power Cycle Footprint



Rare Earth Elements (REEs) & Critical Materials (CMs)

- Efficient REE & CM Recovery, Extraction & Separation
- Cost-Competitive Domestic Supply of REEs & CMs



NETL Crosscutting Research Program



Sydni Credle, Ph.D., P.E.

Technology Manager

Sensors and Controls
Modeling, Simulation and Analysis
University Training and Research

304-285-5255

sydni.credle@netl.doe.gov



<https://netl.doe.gov/coal/crosscutting>

Briggs White, Ph.D.

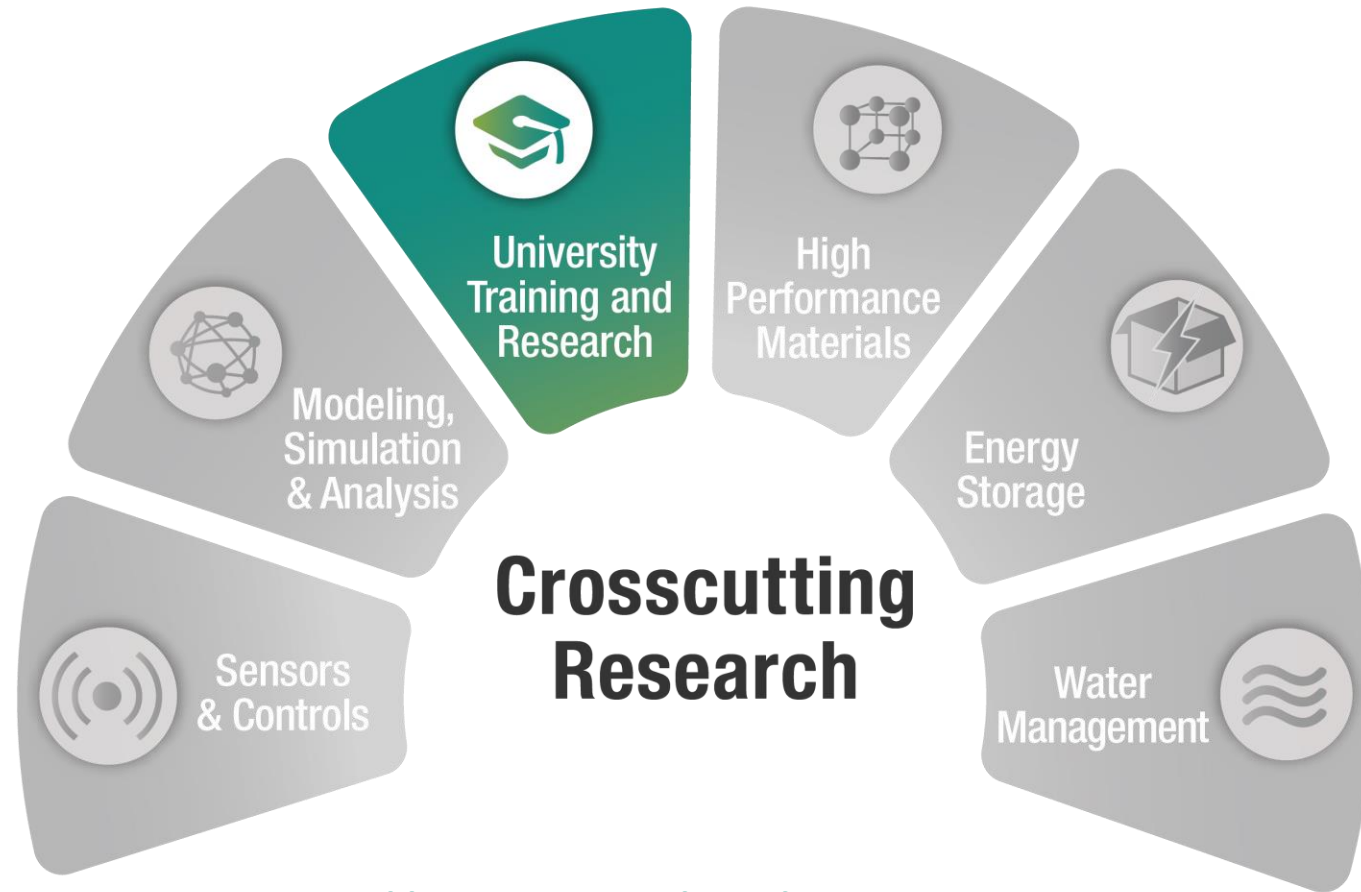
Technology Manager

High Performance Materials
Energy Storage
Water Management

412-386-7546

briggs.white@netl.doe.gov

University Training and Research Program



<https://netl.doe.gov/coal/university-training>

University Training and Research Program



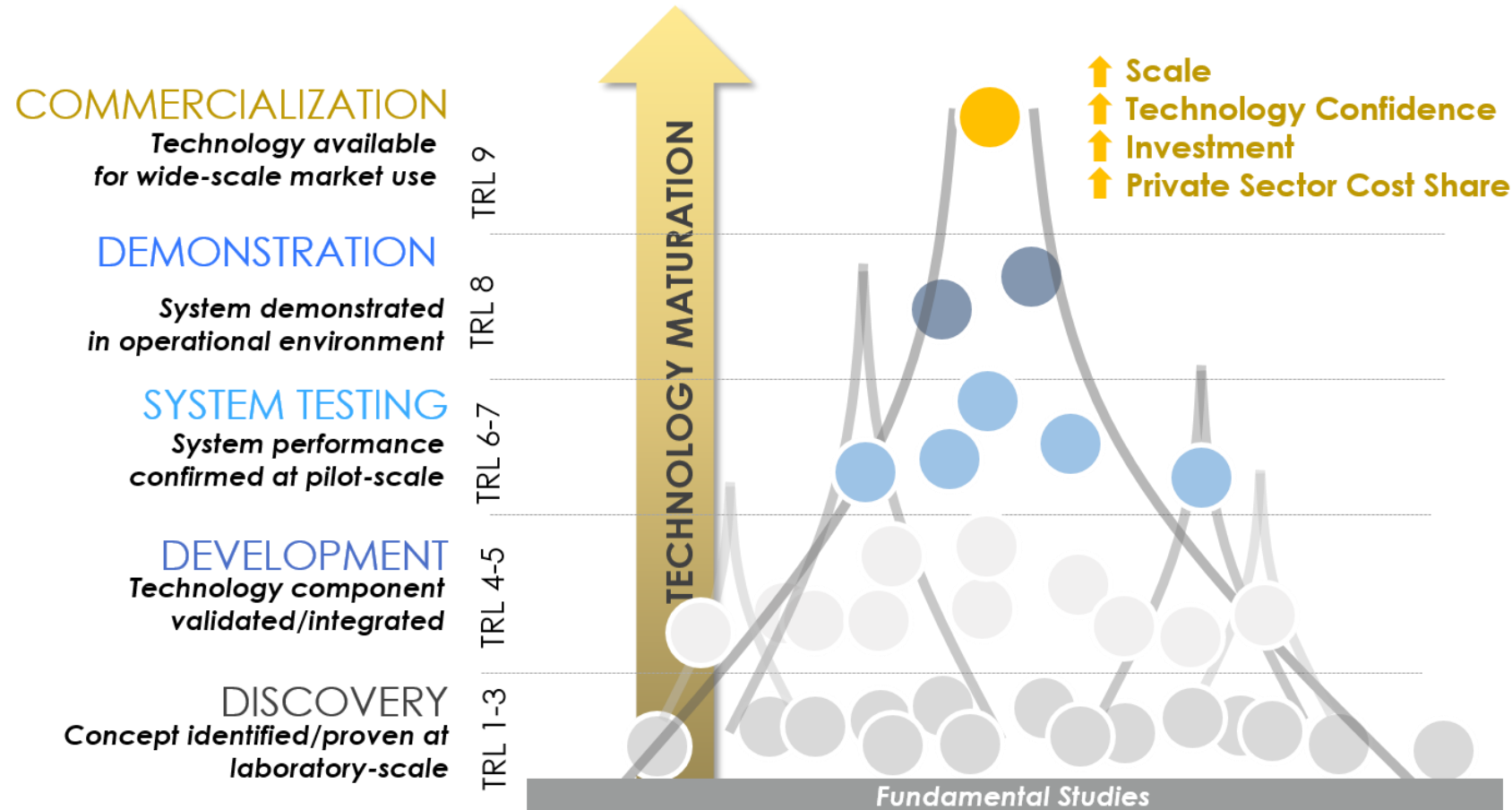
Historically Black Colleges & Universities (HBCU)
and Other Minority Institutions (OMI)

University Coal Research (UCR)

Education and Training Program for Next Generation of Engineers and Scientists

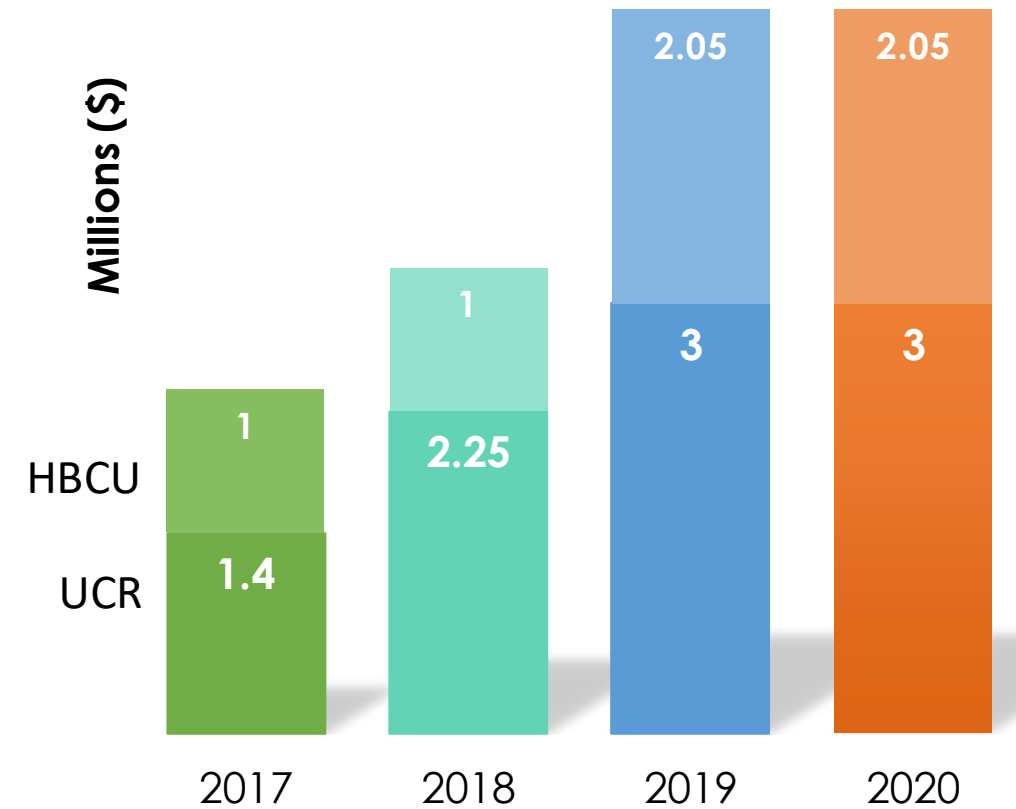
University Training and Research Program

Nurture technologies from initial idea/concept through the various stages of development, including proof of feasibility, prototyping, field testing, etc.



UTR Program is traditionally TRL 2-4

UTR Program Budget History

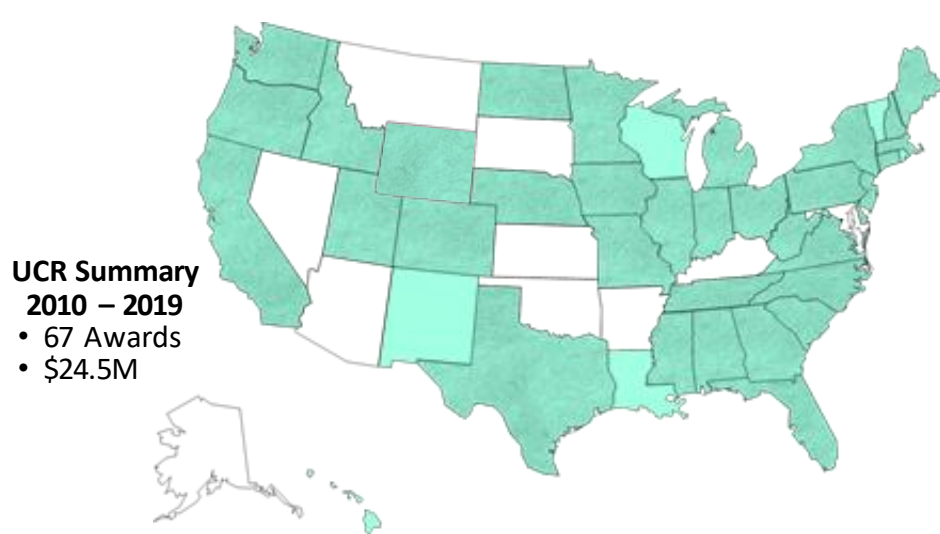


Budget Lines	FY17	FY18	FY19	FY20
Sensors & Controls	\$3.65M	\$7.5M	\$8M	\$9M
Modeling	\$20.85M	\$20M	\$14M	\$6.8M
Water Management	\$9.8M	\$7M	\$8M	\$9M
Materials	\$8M	\$20M	\$20M	\$21M
Energy Storage	—	—	—	\$4.5M
HBCU-OMI	\$1M	\$1M	\$2.05M	\$2.05M
UCR	\$1.4M	\$2.25M	\$3M	\$3M
Total	\$44.7M	\$57.75M	55.05M	55.35M

UTR Program Accomplishments

Workforce & Talent Development

- Since 2010, \$33.8M and 104 grants
- In FY19, **105 students** affiliated with the program
 - 44 students affiliated with HBCU-OMI
 - 61 students affiliated with UCR
- STEM training to address workforce gaps



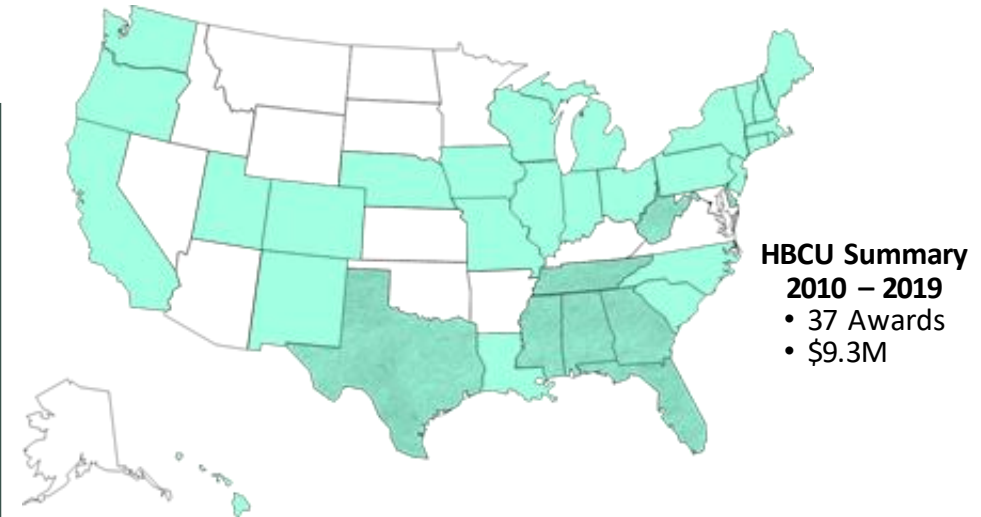
Since Program Inception through 2019

UCR Program Results:

- 1000+ Technical Papers
- 10+ Technical Awards
- 7 Patents Issued to Date

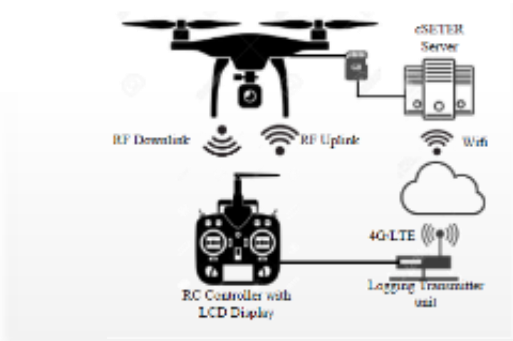
HBCU Program Results:

- 500+ Technical Papers
- 5+ Technical Awards
- 2 Patents Issued to Date

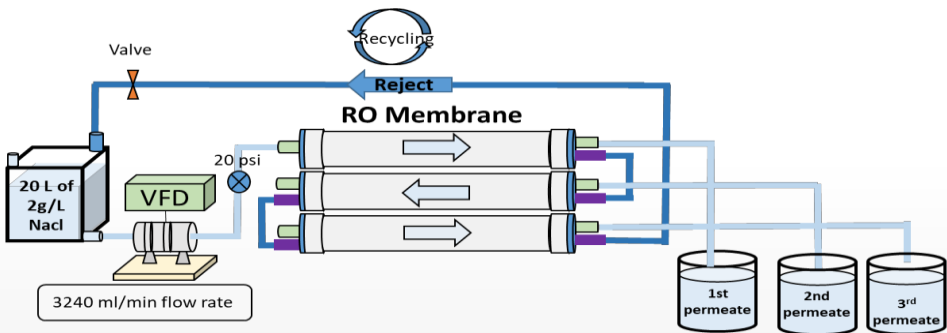


UTR Portfolio Highlights

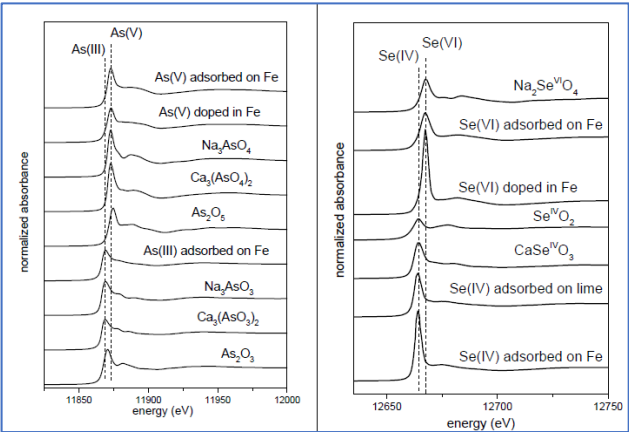
ROBOTICS FOR NON-DESTRUCTIVE EVALUATION



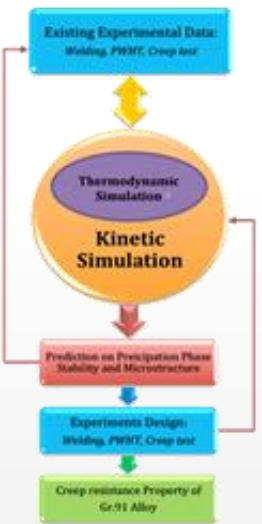
WATER TREATMENT



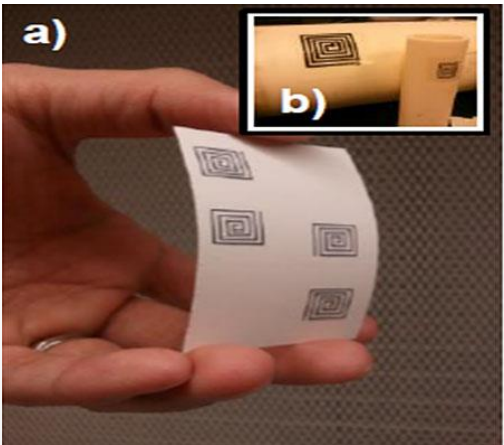
ARSENIC & SELENIUM IN COAL FLY ASH



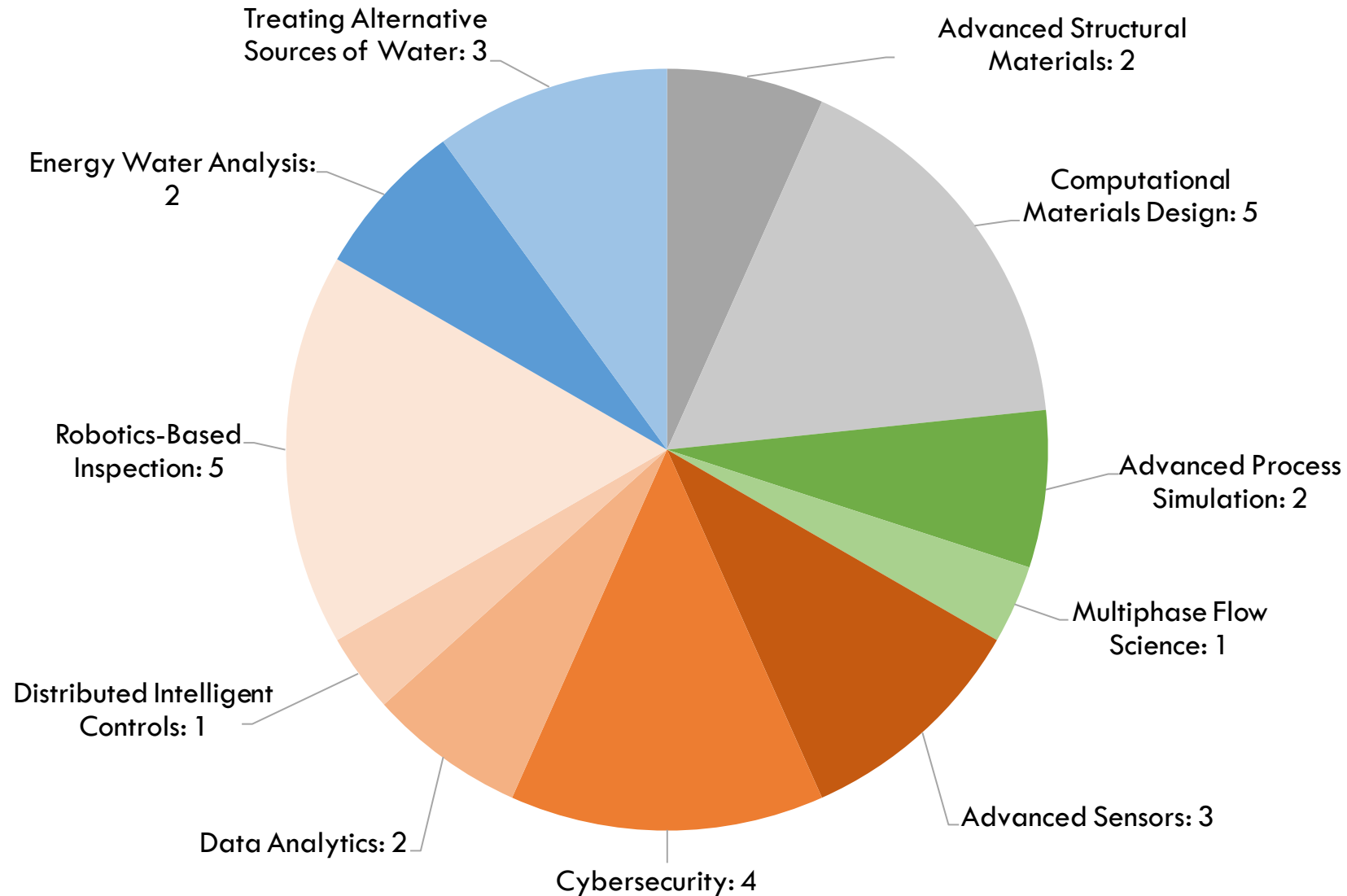
CREEP BEHAVIOR MODELING



PASSIVE WIRELESS SENSORS



UTR Program - Number of Projects by Technology



Last update: May 2020

FOA Awards in FY 19 and FY 20

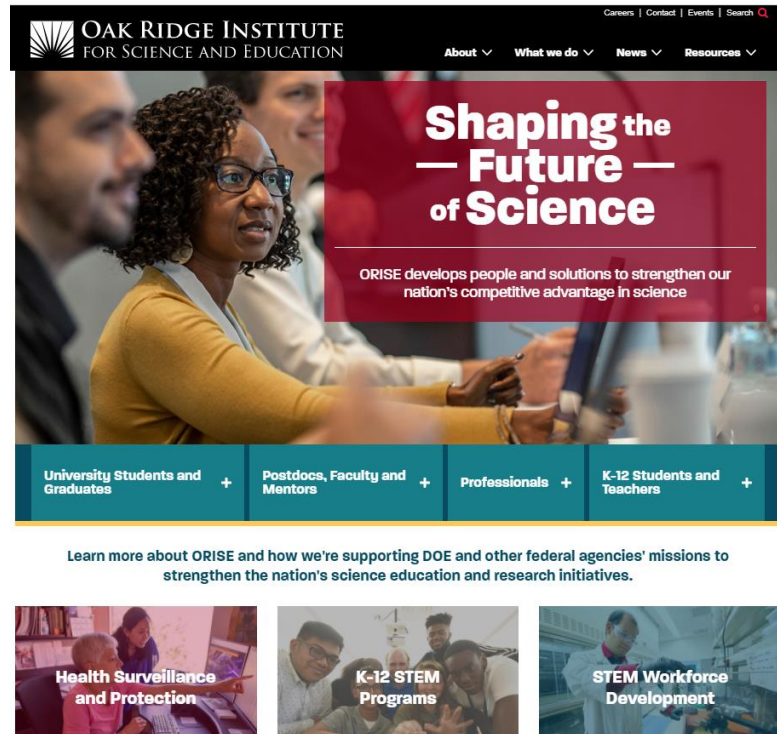


FOA (FY19)	Title	Issuance Date	Closing Date	Topic	Details / DOE Funding
DE-FOA-0001842	Support of Fossil Energy Research at U.S. Colleges and Universities Including University Coal Research (UCR) and Research by Historically Black Colleges and Universities and Other Minority Institutions (HBCU/OMI)	01/31/2018	4/09/2018	Automated Plant Component Inspection, Analysis, and Repair Enabled by Robotics	5 projects / \$2,083,169
				Coal Contaminant Partitioning in Power Plant Wastewater	2 projects / \$800,000
DE-FOA-0001991	University Training and Research for Fossil Energy Applications	12/17/2018	02/25/2019	Cybersecure Sensors for Fossil Power Generation	4 projects / \$1,600,000
				Modeling Existing Coal Plant Challenges using High Performance Computing	3 projects / \$1,199,238
				Application of Novel Analytic Method(s) to Determine Arsenic and/or Selenium Concentrations in Fly Ash Waste Streams Generated from Coal Combustion	2 projects / \$799,706
				Coal Plant Effluent Water Reuse	1 projects / \$400,000

FOA (FY20)	Title	Issuance Date	Closing Date	Topic	Details / DOE Funding
DE-FOA-0002193*	University Training and Research for Fossil Energy Applications	12/20/2019	03/02/2020	Quantum for Energy Systems and Technologies	12 projects / \$5,994,000
				Novel Sensors and Controls for Flexible Generation	
				Machine Learning for Computational Fluid Dynamics (CFD)	
				Fast, Efficient, And Reliable Fossil Power with Integrated Energy Storage	

Internship & Fellowship Opportunities

Oak Ridge Institute for Science and Education (ORISE)



<https://orise.orau.gov/>

Mickey Leland Energy Fellowship (MLEF) Program



<https://netl.doe.gov/education/internships/MLEF>

Crosscutting Research Program Information (Web Links)



Crosscutting Research

www.netl.doe.gov/research/coal/crosscutting

University Training & Research

<https://netl.doe.gov/coal/university-training>

Project Information

www.netl.doe.gov/research/coal/crosscutting/project-information

Project Portfolios/Publications

www.netl.doe.gov/research/coal/crosscutting/publications

Program Brochures

<https://www.netl.doe.gov/research/coal/crosscutting/publications>

The Crosscutting Research Program (CROSSCUTTING RESEARCH) is a unique program that leverages technological capabilities to accelerate fossil energy technology development. The program has a unique ability to see and foster applications of a given technology across a number of programs.

The Crosscutting Program facilitates its R&D efforts through collaboration with other government agencies, large and small businesses, and universities.

The Crosscutting Program sponsors two of the longest-running university training programs that prepares the next generation of scientists and engineers to meet future energy challenges.

The activities within the five primary research areas target enhanced fossil energy systems availability with the goal of creating **transformational technology** that will improve plant efficiency and reduce costs with a focus on developing novel energy infrastructure, and revolutionizing energy systems.

EXPLORE KEY TECHNOLOGY AREAS

- SENSORS & CONTROLS**
Program develops sensors and controls capable of monitoring parameters of interest and transmitting indications of component health while operating in harsh environments.
- SIMULATION-BASED ENGINEERING**
Program enables researchers to observe experiments with phenomena and key elements that are either not observable or impractical to research in-situ applications.
- HIGH PERFORMANCE MATERIALS**
Program develops novel materials that aim to reduce cost and time needed to develop and commercialize fossil energy applications in extreme operating environments.

U.S. DEPARTMENT OF ENERGY

CROSSCUTTING RESEARCH

The Crosscutting Research Program is unique in its ability to see and foster applications of a given technology across a number of fossil energy programs, and is able to effectively leverage resources to accomplish common goals. Other programs and materials that advance one technology platform may not have application in another with little to no modification.

The Crosscutting Research program leverages the latest technology trends such as:

- DATA ANALYTICS
- REMOTE MONITORING
- BIG DATA ANALYTICS
- CLOUD COMPUTING

These advanced capabilities accelerate progress toward addressing the challenges facing today's fossil power plants and enable the next generation of fossil energy technology platforms.

The technologies developed by the Crosscutting Research program improve present plant efficiency and reduce operating and maintenance costs, while maintaining reliable and efficient energy infrastructure.

The Crosscutting Research program utilizes the advanced technological capabilities of the National Energy Technology Laboratory, including the operational integration of new and innovative technologies (e.g., advanced materials, advanced process control, advanced data analytics, etc.) to develop and commercialize fossil energy technology platforms.

Crosscutting brings together industry, academia, and government resources to drive efficient fossil energy solutions.

Questions?

VISIT US AT: www.NETL.DOE.gov



@NETL_DOE



@NETL_DOE



@NationalEnergyTechnologyLaboratory

CONTACT:

Sydni Credle

Technology Manager
Modeling, Simulation and Analysis
304-285-5255

Sydni.Credle@netl.doe.gov

Bhima Sastri

Director
Crosscutting R&D and Systems Integration
301-903-8821

Bhima.Sastri@hq.doe.gov

University Training and Research

<https://netl.doe.gov/coal/university-training>



Doing Business with the Federal Government

Bethan Young

Contract Specialist, Finance & Acquisition Center



Steps to Apply for an NETL Grant



- Identify opportunity of interest through **Funding Opportunity Announcement (FOA)**
 - Discussed in detail later in presentation
- Meet registration requirements
- Prepare and submit application

The Funding Opportunity Announcement (FOA)

- A publicly available document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements, usually as a result of competition for funds
- May be known as **program announcements, requests for applications, notices of funding availability, solicitations, or other names** depending on the agency and type of program
- See recent DE-FOA-0001991
 - **FUNDING IS CLOSED; FOR EXAMPLE USE ONLY**
 - <http://www.fedconnect.net/fedconnect/?doc=DE-FOA-0001991&agency=DOE>

FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



Department of Energy (DOE)
Office of Fossil Energy (FE)

UNIVERSITY TRAINING AND RESEARCH FOR FOSSIL ENERGY APPLICATIONS

Funding Opportunity Announcement (FOA) Number: DE-FOA-0001991

FOA Type: Initial

CFDA Number: 81.089 Fossil Energy Research and Development

Submission Deadline for Full Applications:	02/25/2019 08:00 PM ET
Expected Date for Selection Notifications:	May 2019

Some key administrative item(s) related to this Funding Opportunity Announcement that may be different from previous years are found in Sections III.D and III.E.

Registration/Submission Requirements



- Obtain a **Dun and Bradstreet Data Universal Numbering System (DUNS)** number (dnb.com/duns-number.html)
- Register with the **System for Award Management (SAM)** (sam.gov/SAM)
- Register with grants.gov
- Register with fedconnect.net

Registration Requirements: Grants.gov



- Register with Grants.gov
 - **There are 3 steps to this process:**
 1. The **Authorized Organizational Representative (AOR)** must register
 2. An email is sent to the **E-Business (E-Biz) POC listed in SAM**. The E-Biz POC must approve the AOR registration using their MPIN from their SAM registration
 3. **AOR verifies that registration was completed** at [Grants.gov](https://www.grants.gov)
- [Grants.gov](https://www.grants.gov) is where you will submit your application package

Registration Requirements: Fedconnect.net



- Applicants must register with FedConnect (fedconnect.net) to submit questions
- View and download announcement documents or amendments
- Communicate with Federal representatives managing the announcement
- **Allow at least 44 days to complete entire registration process**

Questions

- Questions related to the registration process, system requirements or how an application form works must be directed to grants.gov; 1-800-518-4726; or support@grants.gov
- Questions related to the content of the announcement must be submitted to the FedConnect portal
- Must be registered with FedConnect to submit questions and view responses

Application Preparation and Submission



- Applicants must download application package, forms and instructions at grants.gov
- Applications must be submitted through [FedConnect](https://www.fedconnect.gov) or grants.gov (this will be indicated in the solicitation document)
 - **Must register at FedConnect or Grants.gov!**
 - Update SAM annually
- Applications must be submitted through grants.gov by **a qualified HBCU/OMI (Minority Serving Institution) authorized representative**

Accessing NETL FOAs in FedConnect

- In an internet browser, enter the FedConnect URL fedconnect.net
- On the Main Page, click on **Search Public Opportunities Only**



FedConnect®
The Government Acquisition & Grants Portal

ALERT: SAM.gov will be down for scheduled maintenance Saturday, 11/09/2019, from 8:00 AM to 3:00 PM. This outage may impact the registration process in FedConnect.

Do you want the US federal government to buy your products or services? Or, are you seeking grants or assistance funding?

FedConnect can help. Every day, FedConnect helps over 100,000 vendors and grant applicants, find, respond to and win opportunities for contracts, grants, and other types of assistance funding. To learn more about how FedConnect works, click here to review the tutorial.

Do you work for a federal agency?

FedConnect is the perfect complement to FedBizOpps and Grants.gov. FedConnect goes beyond the basic features of those systems to provide full lifecycle support including the ability to post opportunities, receive responses, deliver awards, and communicate throughout the pre-award, award, and post-award phases using FedConnect's secure 2-way messaging. Click here to learn more.

Sign In - Full Access →

Search Public Opportunities Only →

Register for Free Account →

Internet Explorer Compatibility Notice: If you are using Internet Explorer 9 (IE9) or above, Compatibility View must be on. Contact support with additional questions.

Need help?

- FedConnect: Ready, Set, Go! Tutorial
- **Updated!** Reverse Auction Vendor Tip Sheet
- Check Registration Status
- Password Reset
- Contact Your Organization's FedConnect Administrator
- Contact FedConnect Support

Want to learn more?

- Participating Government Agencies
- Accessibility Features

Accessing NETL FOAs in FedConnect (cont.)



- Under **Search Criteria**, select **Issuing Office**, type “**National Energy Technology Lab**”, and click on **Search**

public opportunities

This is a list of publicly posted opportunities. To view a particular opportunity, click the hyperlink under the title. For more details on using this page, click Help.

Search Criteria | Advanced Options

Issuing Office

National Energy Technology Lab

Search

Title	Type	Agency	Issuing Office	Issue Date	Response Due Date	PSC / FSC	NAICS	Reference Number
Vacuum Induction Melting (VIM) and Casting Furnace	Solicitation	DOE - DOE	National Energy Technology Lab	11/9/2020	12/01/2020 04:00 PM US/Eastern	4430	333994	89243321QFE000206
Notice of Intent to Sole Source to FEI Houston Company for FEI PerGeos 1.0 soft	Special Notice	DOE - DOE	National Energy Technology Lab	11/24/2020 1:27:09 PM	11/30/2020 12:00 PM US/Eastern	7A20	511210	89243321QFE000209
Notice of Intent to Sole Source to EPRI Technology	Special Notice	DOE - DOE	National Energy Technology Lab	11/20/2020 1:17:28 PM		R415	541690	89243321RFE000048
Emerging CO2 Storage Technologies: Optimizing Performance Through Minimization of Seismicity Risks and Monitoring Caprock Integrity	Funding Opportunity	DOE - DOE	National Energy Technology Lab	11/16/2020	12/11/2020 08:00 PM US/Eastern			DE-FOA-0002401
Notice of Intent to issue DE-FOA-0002438 titled Design, R&D, Validation, and Fabrication of a Prototype Carbon-Based Building	Funding Opportunity	DOE - DOE	National Energy Technology Lab	11/12/2020	12/07/2020 08:00 PM US/Eastern			DE-FOA-0002442
Broughton Volunteer Fire Department (BVFD) Services	Special Notice	DOE - DOE	National Energy Technology Lab	11/10/2020 11:56:01 AM	11/25/2020 05:00 PM US/Eastern	J012	922160	89243321QFE000207
Notice of Intent to issue a Funding Opportunity Announcement (FOA) on behalf of DOE's Office of Fossil Energy (FE) entitled "Water Management For Thermal Power Generation".	Funding Opportunity	DOE - DOE	National Energy Technology Lab	10/30/2020	12/15/2020 08:00 PM US/Eastern			DE-FOA-0002430
Enabling Gasification of Blended Coal, Biomass and Plastic Wastes to Produce Hydrogen with Potential for Net Negative Carbon Dioxide Emissions.	Funding Opportunity	DOE - DOE	National Energy Technology Lab	10/23/2020	11/19/2020 11:59 AM US/Eastern			DE-FOA-0002376
Bottled Water and Dispenser Service for NETL	Solicitation	DOE - DOE	National Energy Technology Lab	10/9/2020	10/23/2020 02:00 PM US/Eastern	S299	454390	89243320QFE000205
Research Needs Related to Enhanced Weathering as a Mechanism for Carbon Dioxide Removal	Funding Opportunity	DOE - DOE	National Energy Technology Lab	10/14/2020	11/06/2020 08:00 PM US/Eastern			DE-FOA-0002427

1 2 3 4 5 6 7 8 9 10 ...

Accessing NETL FOAs in FedConnect (cont.)

- Click the [hyperlink](#) under the title to view

FedConnect.

[Help](#)

public opportunities

This is a list of publicly posted opportunities. To view a particular opportunity, click the hyperlink under the title. For more details on using this page, click Help.

<div><div><div><div></div></div></div><div><div>Search Criteria</div> Advanced Options</div></div>								
<div>Issuing Office</div>			<div>National Energy Technology Lab</div>				<div>Search</div>	
Title	Type	Agency	Issuing Office	Issue Date	Response Due Date	PSC / FSC	NAICS	Reference Number
Purchase of M15-400 Assy. RP Consistometer M15-40	Special Notice	DOE - DOE	National Energy Technology Lab	11/7/2019 10:05:42 AM		6635	811310	89243320RFE000029
Notice of Intent to Sole Source to FEI Houston Com	Special Notice	DOE - DOE	National Energy Technology Lab	11/4/2019 11:02:25 AM	11/15/2019 12:00 PM US/Eastern	7030	334516	89243320QFE000146
RFI: Energy Storage for Fossil Fuel Energy Systems	Funding Opportunity	DOE - DOE	National Energy Technology Lab	10/30/2019	12/16/2019 08:00 PM US/Eastern			DE-FOA-0002209
Security Support Services for the Office of the As	Sources Sought	DOE - DOE	National Energy Technology Lab	10/25/2019 8:20:52 AM	11/22/2019 08:00 PM US/Eastern	R430	561612	89243320NAU000002
Revised Sources Sought Critical Minerals Market An	Pre-solicitation Notice	DOE - DOE	National Energy Technology Lab	10/18/2019 2:45:14 PM	11/15/2019 02:00 PM US/Eastern	R425	541720	89243320NFE000030

Accessing NETL FOAs in FedConnect (cont.)

- Click on the **FOA Reference Number** under **Funding Opportunity** to view the FOA instructions
- To view Amendments to the FOA, click on the **FOA Reference Number** under **Amendment 1**

FedConnect.

Videos | Help

Opportunity: Crosscutting Research for Coal-Fueled Power Plants

Description

The purpose of Amendment 000001 is to re-open the FOA to receive applications in response to the second closing date, to change the second application closing due date to 12/12/2019, and to incorporate revisions. Please read the FOA document carefully when preparing your application.

Overview

Reference number: DE-FOA-0002001
Issue date: 09/23/2019
Response due: 12/12/2019 11:59 PM US/Eastern

Set Aside:
NAICS:
PSC / FSC:

Agency: DOE

Contracting office:

National Energy Technology Lab
U.S. Department of Energy
Morgantown Campus
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880

Place of Performance:

What do I do now?

This is the opportunity summary page. To the left you will see a description and an overview of this opportunity. To the right you will see a list of the attached documentation. To view any of the attachments, simply click the attachment name.

Registered Users

To register interest in this opportunity or to electronically respond, you must first sign in. Click the Sign In button below.

[Sign In](#)

Non Registered Users

You can view this or any other public opportunity. However, registered users have numerous added benefits including the ability to submit questions to the agency, receive emails concerning updates and amendments, create and manage a response team and submit responses directly through this site.

Becoming a registered user is fast, free and takes only a few minutes. To get started, click the Register Now button below.

[Register Now](#)

Documentation

- DE-FOA-0002001
 - Funding Opportunity
 - Overview
 - DE-FOA-0002001
 - Budget Justification File
 - Amendment 1
 - Overview
 - DE-FOA-0002001 - Amendment 000001

Accessing NETL FOAs in FedConnect (cont.)

- **Help** buttons are available on each page to assist you navigate FedConnect
- To submit questions about this FOA or submit an application, Registered Users click on **Sign In**
- Click on **Register Now** to receive notifications and agency alerts, and view the message center

FedConnect.

Videos → Help

Opportunity: Crosscutting Research for Coal-Fueled Power Plants

Description

The purpose of Amendment 000001 is to re-open the FOA to receive applications in response to the second closing date, to change the second application closing due date to 12/12/2019, and to incorporate revisions. Please read the FOA document carefully when preparing your application.

Overview

Reference number: DE-FOA-0002001
Issue date: 09/23/2019
Response due: 12/12/2019 11:59 PM US/Eastern

Set Aside:
NAICS:
PSC / FSC:

Agency: DOE

Contracting office:

National Energy Technology Lab
U.S. Department of Energy
Morgantown Campus
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880

Place of Performance:

What do I do now?

This is the opportunity summary page. To the left you will see a description and an overview of this opportunity. To the right you will see a list of the attached documentation. To view any of the attachments, simply click the attachment name.

Registered Users

To register interest in this opportunity or to electronically respond, you must first sign in. Click the Sign In button below.

[Sign In](#)

Non Registered Users

You can view this or any other public opportunity. However, registered users have numerous added benefits including the ability to submit questions to the agency, receive emails concerning updates and amendments, create and manage a response team and submit responses directly through this site.

Becoming a registered user is fast, free and takes only a few minutes. To get started, click the Register Now button below.

[Register Now](#)

Documentation

- DE-FOA-0002001
 - Funding Opportunity
 - Overview
 - DE-FOA-0002001
 - Budget Justification File
 - Amendment 1
 - Overview
 - DE-FOA-0002001 - Amendment 000001

Opportunities for Work with NETL



- NETL Research Programs use the websites below to post solicitations/funding opportunity announcements, receive proposals/applications, and disseminate other information for competitive awards. **Entities wishing to participate in these solicitations must register at these websites.**
 - Fedconnect <https://www.fedconnect.net/>
 - Grants.gov <https://grants.gov/>
- **Proposals will only be accepted through FedConnect or [Grants.gov](https://grants.gov/)** (this will be indicated in the solicitation document). Each website has the ability to send email messages to potential applicants when a new solicitation from NETL is posted.
- Additional information can also be found at NETL Business website: <https://netl.doe.gov/business/solicitations>

Questions?

VISIT US AT: www.NETL.DOE.gov



@NETL_DOE



@NETL_DOE



@NationalEnergyTechnologyLaboratory

CONTACT:

Bethan Young

Contract Specialist, Finance & Acquisition Center

412-386-4402

Bethan.young@netl.doe.gov



University Training and Research Funding Opportunity Announcements (FOAs)



Bethan Young

Contract Specialist, Finance & Acquisition Center



December 2, 2020
HBCU-OMIFE Webinar

General Information

Where to start?

- A typical Funding Opportunity Announcement (FOA) follows a standard format.
- **The solicitation contains 8 main sections** (with multiple sub-sections) laid out in the table of contents and focusing on the complete life cycle of the solicitation.
- It is important to familiarize yourself with the entire FOA and **pay close attention to the sections that offer critical guidance on how to create a responsive application.**

TABLE OF CONTENTS MAIN SECTIONS

- I. FUNDING OPPORTUNITY DESCRIPTION
- II. AWARD INFORMATION
- III. ELIGIBILITY INFORMATION
- IV. APPLICATION AND SUBMISSION INFORMATION
- V. APPLICATION REVIEW INFORMATION
- VI. AWARD ADMINISTRATION INFORMATION
- VII. QUESTIONS/AGENCY CONTACTS
- VIII. OTHER INFORMATION
- IX. APPENDICES

I. Funding Opportunity Description

Where to start?

TABLE OF CONTENTS

- I. FUNDING OPPORTUNITY DESCRIPTION
 - i. AUTHORIZING STATUES
 - ii. BACKGROUND/DESCRIPTION
 - iii. OBJECTIVES/AREAS OF INTEREST
 - iv. APPLICATIONS SPECIFICALLY NOT OF INTEREST

Noteworthy Items

- **ii. Background/Description**
 - Provides information on what technology programs are funding the solicitation and introduction to the purpose of the announcement.
- **iii. Objectives/Area of Interests**
 - Provides important information on the technological objectives and research being sought, as well as the description of the Areas of Interest (AOIs).
 - You will be applying to a specific AOI and understanding the FOA requirements for that AOI is critical to crafting a responsive application.
(Will be discussed in detail in upcoming presentation)
- **iv. Applications Specifically Not of Interest**
 - Pay close attention to this section to avoid submitting a non-responsive application.

II. Award Information

Where to start?

TABLE OF CONTENTS

A. TYPE OF APPLICATION

B. TYPE OF AWARD INSTRUMENT

C. AWARD OVERVIEW

- i. ESTIMATED FUNDING, NUMBER OF AWARDS, ANTICIPATED AWARD SIZE, AND MAXIMUM DOE SHARE
- ii. ESTIMATED PERIOD OF PERFORMANCE PER AREA OF INTEREST

Noteworthy Items

- C. Award Overview

- I. Estimated Funding, Number of Awards, Anticipated Award Size, and Maximum DOE Share

- Details anticipated number of awards, anticipated size (in funding) of each award, **and maximum amount in funding that DOE will contribute for any one award.**

- II. Estimated Period of Performance per Area of Interest

- Includes the anticipated period of performance for projects awarded under each Area of Interest of the FOA.

III. Eligibility Information

Where to start?

TABLE OF CONTENTS

A. GENERAL

B. ELIGIBLE APPLICANTS

- i. RESTRICTED ELIGIBILITY
- ii. DOMESTIC ENTITIES
- iii. DOMESTIC PUBLIC ENTITIES (EXCLUDING FEDERAL ENTITIES)
- iv. FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS AND NATIONAL LABS

C. COST SHARING

- i. COST SHARE REQUIREMENTS
- ii. LEGAL RESPONSIBILITY
- iii. COST SHARE ALLOCATION
- iv. COST SHARE TYPES AND ALLOWABILITY
- v. COST SHARE VERIFICATION
- vi. COST SHARE CONTRIBUTIONS BY FFRDCs

D. COMPLIANCE CRITERIA

E. RESPONSIVENESS CRITERIA

F. NUMBER OF SUBMITTALS ELIGIBLE FOR REVIEW

G. FELONY CONVICTIONS AND TAX LIABILITIES

H. QUESTIONS REGARDING ELIGIBILITY

Noteworthy Items

• B. Eligible Applicants

- Will specify whether HBCU - OMI eligible applicants will be funded under awards
 - Other types of sub-recipients are permitted
- FFRDC & National Labs are permitted to apply as subrecipients but not as a prime
 - National Labs are typically fully funded at project start. Please keep this in mind when creating budgets for the full project period.

• C. Cost Sharing

I. Cost Share Requirements

- Will detail the required cost share for Applicants. Typically, HBCU-OMI FOAs do **not require cost share**, but it is allowable

• D&E. Compliance Criteria, and Responsiveness Criteria

- These sections will detail **what is considered compliant, and responsive**, to the FOA. Only compliant and responsive applicants will be eligible to review.

Make sure to read EACH section for compliance purposes.



IV. Application and Submission Information

Where to start?

TABLE OF CONTENTS

- A. FORM AND CONTENT REQUIREMENTS
- B. FULL APPLICATIONS
 - i. APPLICATION PACKAGE
 - ii. CONTENT AND FORM OF FULL APPLICATION
- C. POST-SELECTION INFORMATION REQUESTS
- D. SUBMISSION DATES AND TIMES
- E. INTERGOVERNMENTAL REVIEW
- F. OTHER SUBMISSION AND REGISTRATION REQUIREMENT
 - i. REGISTRATION PROCESS
 - ii. WHERE TO SUBMIT
 - iii. FULL APPLICATION PROOF OF TIMELY SUBMISSIONS
- G. FUNDING RESTRICTIONS
- H. PRE-AWARD COSTS
- I. PRE-AWARD COSTS RELATED TO NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENT
- J. PERFORMANCE OF WORK IN THE UNITED STATES
- K. FOREIGN TRAVEL
- L. EQUIPMENT AND SUPPLIES
- M. LOBBYING
- N. ADDITIONAL APPLICATION AND SUBMISSION REQUIREMENTS

Noteworthy Items

- **A. Form and Content Requirements**
 - Applicants will have to meet each of the specified form requirements under this section
- **B. Full Applications**
 - ii. Content and Form of Full Application
 - Will detail the documents required in the Application.

IV. Application and Submission Information

Application Files

SF-424

PROJECT /
PERFORMANCE
SITE
LOCATION(S)

PROJECT
NARRATIVE

SUMMARY
FOR PUBLIC
RELEASE

PROJECT
MANAGEMENT
PLAN

RESUME

SF424A
BUDGET
JUSTIFICATION

BUDGET
JUSTIFICATION

ENVIRONMENTAL
QUESTIONNAIRE

HBCU/OMI-
ELIGIBLE
DOCUMENT, IF
APPLICABLE

- The SF 424 online form is the principal form for submitting an application.
- This form contains **all of the basic information regarding your organization and your proposed project** (project title, costs, etc.).
- Please make sure this form is filled out as completely as possible.
- Some areas of the form may not apply to your organization.

- Form to indicate the primary site where the work will be performed.
- If a portion of the project will be performed at any other site(s), identify the site location(s) in the blocks provided
- Note that the Project/Performance Site Congressional District is entered using a 2-digit state code followed by a dash and a 3-digit Congressional district code. For example "VA-001"

- In this document, please state how your educational entity claims HBCU/OMI eligibility and provide a copy of that certification.

IV. Application and Submission Information

Project Narrative

SF-424

PROJECT /
PERFORMANCE
SITE
LOCATION(S)

**PROJECT
NARRATIVE**

SUMMARY
FOR PUBLIC
RELEASE

PROJECT
MANAGEMENT
PLAN

RESUME

SF424A
BUDGET
JUSTIFICATION

BUDGET
JUSTIFICATION

ENVIRONMENTAL
QUESTIONNAIRE

HBCU/OMI-
ELIGIBLE
DOCUMENT, IF
APPLICABLE

- The project narrative is the core item in the application package, where the concept, technology background, research plan, and potential improvement to the state of the art are presented.

Project Narratives Can Include:

- Project Objectives
- Merit Review Criterion Discussion
- Relevance and Outcomes/Impacts
- Roles & Responsibilities of Participants
- Decision-making and Communication Strategy
- Management Capabilities
- Multiple Principal Investigators
- Facilities And Other Resources
- Equipment
- Bibliography And References
- Statement of Project Objectives (SOPO)

Pay close attention to formatting requirements:

- The Project Narrative File must be submitted in **Adobe PDF format**.
- For example: the project narrative **must not exceed twenty-five (25) pages**, including footnotes/endnotes, charts, graphs, maps, photographs, and other pictorial presentations, **when printed using standard 8.5" by 11" paper with 1-inch margins (top, bottom, left, and right) double spaced**.
- Cover Page, Table of Contents, Bibliography and References, Current and Pending Support, and Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers sections **are NOT included in the Project Narrative page limitation**. The font **must be Times New Roman typeface, a black font color, and a font size of 11-point or larger (except in figures or tables, which may be 10-point font)**.
- **Applicants tend to repeat themselves within an application. Please note that each file is a stand-alone document. Do not refer to another document within the current one.**

IV. Application and Submission Information

Project Narrative Sections

SF-424	PROJECT / PERFORMANCE SITE LOCATION(S)	PROJECT NARRATIVE	SUMMARY FOR PUBLIC RELEASE	PROJECT MANAGEMENT PLAN	RESUME	SF424A BUDGET JUSTIFICATION	BUDGET JUSTIFICATION	ENVIRONMENTAL QUESTIONNAIRE	HBCU/OMI- ELIGIBLE DOCUMENT, IF APPLICABLE
--------	---	------------------------------	----------------------------------	-------------------------------	--------	-----------------------------------	-------------------------	--------------------------------	---

Narrative Section	Intent/Helpful Information
PROJECT OBJECTIVES	Should provide a clear, concise statement of the specific objectives/aims of the proposed project
MRC DISCUSSION	Applications are evaluated and scored in accordance with the merit review criteria and weights provided in the FOA
RELEVANCE & OUTCOMES/IMPACTS	Justification for the proposed project should include a clear statement of the importance in terms of the utility of the outcomes and the target community of beneficiaries
ROLES & RESPONSIBILITIES OF PARTICIPANTS	Describe the roles and the work to be performed by each participant/investigator, business agreements between the applicant and participants, and how the various efforts will be integrated and managed
DECISION-MAKING AND COMMUNICATION STRATEGY	Emphasis on scientific/technical direction and mechanisms for controlling project scope, cost, and schedule.
MANAGEMENT CAPABILITIES	Provide information relevant to the capabilities and experience of the PI and project team in managing technical projects of similar nature and complexity.
FACILITIES & OTHER RESOURCES	If appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project
EQUIPMENT	If you are proposing to acquire equipment, describe comparable equipment, if any, already at your organization and explain why it cannot be used
BIBLIOGRAPHY & REFERENCES	This section is not typically included in the page limitation of the project narrative
STATEMENT OF PROJECT OBJECTIVES (SOPO)	The SOPO should contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below

IV. Application and Submission Information

Application Files

SF-424

PROJECT /
PERFORMANCE
SITE
LOCATION(S)

PROJECT
NARRATIVE

SUMMARY
FOR PUBLIC
RELEASE

PROJECT
MANAGEMENT
PLAN

RESUME

SF424A
BUDGET
JUSTIFICATION

BUDGET
JUSTIFICATION

ENVIRONMENTAL
QUESTIONNAIRE

HBCU/OMI-
ELIGIBLE
DOCUMENT, IF
APPLICABLE

- A key item to remember with the Project Summary file is that it can be publicly distributed, do not include **ANY** proprietary or business sensitive information.
- Self-contained, one (1) page document
- Identifies: name of the applicant; project director/principal investigator(s); project title; objectives of the project; description of the project; methods to be employed; potential impact (i.e., benefits, outcomes); major participants

- This plan typically includes the following sections:

- Executive Summary
- Risk Management
- Milestone Log
- Funding and Costing Profile
- Project Timeline
- Success Criteria at Decision Points

PMP is generally 6-8 pages when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) single-spaced with font no smaller than 11- point.

- Environmental questionnaire for each geographic site where project activities will take place must be completed
- **The form is located at**
https://www.netl.doe.gov/sites/default/files/2018-02/451_1-1-3_0.pdf

IV. Application and Submission Information



Application Files

SF-424

PROJECT /
PERFORMANCE
SITE
LOCATION(S)

PROJECT
NARRATIVE

SUMMARY
FOR PUBLIC
RELEASE

PROJECT
MANAGEMENT
PLAN

RESUME

SF424A
BUDGET
JUSTIFICATION

BUDGET
JUSTIFICATION

ENVIRONMENTAL
QUESTIONNAIRE

HBCU/OMI-
ELIGIBLE
DOCUMENT, IF
APPLICABLE

- Each key person proposed on the project, including sub-awardees and consultants, need to submit a 2-page resume with the application.
- A key person is any individual **who contributes in a substantive, measurable way to the execution of the project.**
- This document should highlight education and training, professional experiences, publications (**you may list up to 10 and they should be those that are most closely related to the proposed project**), patents/copyrights/software systems developed, and synergistic activities (**no more than 5**). All resumes should be compiled into a single file.
- **Each resume should not exceed 2 pages including (if applicable):**
 - **Education and Training:** provide institution, major/area, degree, and year (Undergraduate, graduate, and postdoctoral training)
 - **Professional Experience:** Beginning with the current position, list in chronological order, include brief description of professional/academic positions
 - **Publications:** Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address (if available).
 - Patents, copyrights, and software systems developed may be provided in addition to or substituted for publications
 - **Synergistic Activities:** List no more than 5 professional and scholarly activities related to the effort proposed

IV. Application and Submission Information

Application Files

SF-424

PROJECT /
PERFORMANCE
SITE
LOCATION(S)

PROJECT
NARRATIVE

SUMMARY
FOR PUBLIC
RELEASE

PROJECT
MANAGEMENT
PLAN

RESUME

SF424A
BUDGET
JUSTIFICATION

BUDGET
JUSTIFICATION

ENVIRONMENTAL
QUESTIONNAIRE

HBCU/OMI-
ELIGIBLE
DOCUMENT, IF
APPLICABLE

- A separate budget for each year of support requested and a cumulative budget for the total project period are usually required
- **Use the SF 424A Excel, "Budget Information - Non-Construction Programs" form on the DOE Financial Assistance Forms Page at <https://www.energy.gov/management/office-management/operational-management/financial-assistance/financial-assistance-forms> under DOE budget forms**

- Justify the costs proposed in each Object Class Category/Cost Classification category.
- **For example:**
 - Identify key persons and personnel categories and the estimated costs for each person or category
 - Provide a list and cost of equipment
 - Identify proposed subaward/consultant work and cost of each subaward/consultant
 - Describe purpose of proposed travel, number of travelers, and number of travel days
 - List general categories of supplies and cost for each category

Please note that if you are selected for award, you may be asked to break down these sections into more specific charges.

V. Application Review Information

Where to start?

TABLE OF CONTENTS

A. REVIEW CRITERIA

- i. COMPLIANCE/RESPONSIVENESS REVIEW
- ii. FULL APPLICATION MERIT REVIEW CRITERIA

B. OTHER SELECTION FACTORS

- i. PROGRAM POLICY FACTORS

C. OTHER REVIEW REQUIREMENTS

- i. RISK ASSESSMENT
- ii. REPORTING MATTERS RELATED TO RECIPIENT INTEGRITY AND PERFORMANCE

D. REVIEW AND SELECTION PROCESS

- i. MERIT REVIEW
- ii. SELECTION
- iii. DISCUSSIONS AND AWARD

Noteworthy Items

- A. Review Criteria

- ii. Full Application Merit Review Criteria

- This section will detail the merit review criteria that the application will be judged by. Each merit review criteria should be addressed via information within the application

Additional Sections (VI, VII, VIII, & IX)

- **VI Award Administration Notice-** Provides information on DOE's award administration processes
- **VII Questions/Agency Contacts** – Provides information on where to submit questions and lists appropriate agency contacts
- **VIII Other Information** – Provides information on additional requirements and templates
- **IX Appendices** – Provides important templates to follow while developing your application

Questions?

VISIT US AT: www.NETL.DOE.gov



@NETL_DOE



@NETL_DOE



@NationalEnergyTechnologyLaboratory

CONTACT:

Bethan Young

Contract Specialist, Finance & Acquisition Center

Bethan.Young@netl.doe.gov



Responding to Areas of Interest (AOIs)

Mark Render

Project Manager, Enabling Technologies and Partnerships



HBCU-OMI Role in Crosscutting Research



- Fossil energy R&D that supports program goals while **educating and training next generation highly-skilled scientists and engineers** in advanced technology systems with knowledge of, and sensitivity for, cultural diversity
- **Identify student roles** when/where possible
- **Research crosscuts many different technology areas** (sensors, materials, simulation, water management, energy storage, etc.)

The FOA provides background materials regarding the topics often called “Areas of Interest” (AOIs)

Areas of Interest

Describe in detail each area of research where NETL is seeking proposals

Should be carefully considered as a potential topic for research proposals

Number/types of areas of interest are dependent on funding in particular areas, DOE mission goals, and technology maturity

Areas of Interest change annually

May also include descriptions of research that are NOT being sought in the FOA

Previous Areas of Interest

FY 2020

[DE-FOA-0002193](#)

AOI 1: Quantum for Energy Systems and Technologies

AOI 2: Novel Sensors and Controls for Flexible Generation

AOI 3: Machine Learning for Computational Fluid Dynamics

AOI 4: Fast, Efficient, And Reliable Fossil Power with Integrated Energy Storage

FY 2019

[DE-FOA-0001991](#)

AOI 1: Application of Novel Analytic Method(s) to Determine Arsenic and/or Selenium Concentrations in Fly Ash Waste Streams Generated from Coal Combustion

AOI 2: Cybersecure Sensors for Fossil Power Generation

AOI 3: Modeling Existing Coal Plant Challenges using High Performance Computing

AOI 4: Coal Plant Effluent Water Reuse

FY 2018

[DE-FOA-0001842](#)

AOI 1: Coal Contaminant Partitioning in Power Plant Wastewater

AOI 2: Automated Plant Component Inspection, Analysis, and Repair Enabled by Robotics

Example Area of Interest

FY 2020 AOI 2: Novel Sensors and Controls for Flexible Generation ([DE-FOA-0002193](#))

Not an Active Area of Interest

This topic seeks novel sensing and controls concepts for continuous, online monitoring for coal-based power generation processes undergoing flexible operation. **For controls R&D, proposals are sought that** develop advanced algorithms to meet the performance challenges of ensuring flexible power systems operation under competing objectives, including (but not limited to) maintaining high efficiency, low cost of operation, etc. **For sensing R&D, the measurements of interest include** temperature, pressure, strain/stress, heat flux, flowrate, and mass flux in conditions that include high temperatures (750 – 1800°C). **Approaches focusing on materials development must** address suitability to extreme environment along with the ability to function as a sensing element. **Non-contact approaches must** consider designs that integrate with an extreme environment and include ruggedized packaging for commercial type applications. Approaches that offer lower cost options for fabrication, the ability to integrate wireless communication, and/or the ability to integrate energy harvesting are of interest. **Applications must** specify the extreme environment that is relevant to fossil-based power generation for which the sensing concept will be targeted, and, clearly describe how the proposed concept differs from commercially available sensors for similar applications. Proposed sensing concepts that do not meet the minimum temperature or offer concepts that are not robust to extreme environment **will be considered non-responsive and not be evaluated.**

Potential recipients that are selected under AOI 2 will be required to submit a Technology Maturation Plan as a deliverable under the award.

Read the FOA Carefully

- Understand the Background/Description
- Understand the specific Objectives
- Understand the topics NETL is interested in funding

Read AOI Language Closely

- Understand where your research strengths best fit with NETL AOIs
- Look for specific thresholds or requirements
- Determine items that are not of interest within that topic area/area of interest

Recycling Applications is Generally NOT a Successful Approach

Get Organized Early

- Create a Proposal Team
- Identify key research team members
- Consider teaming with other institutions
 - Provide letters of support
 - Financial investment if applicable
 - Be as specific as possible
- Develop an Application Preparation Schedule and Key Submittal Dates

Ask Questions

- Use FedConnect to ask questions while FOA is open
 - **Can be used for technical, administrative, or FOA clarification** (differences between milestones, success criteria, deliverables, etc.)
- See if your questions have already been asked/answered on the server

Identify Required Submittals

- SF-424, Narrative, Abstract, Project Management Plan, Budget Justifications etc.
- Address **ALL** Areas
 - Follow the review criteria and ensure that all aspects are clearly addressed by your application

 Address the “Cake” prior to the “Icing” 

Submit All Documentation

- Ensure that all required documentation is submitted
- **Failure to do so can result in a non-responsive application**
- Ensure Page limits, margins, spacing, font size (all specified within the FOA)
- Ensure cohesiveness and consistency between documentation (budgets, narrative, SOPO, PMP, etc.)

Verify that the final application complies with ALL FOA requirements

Questions?

VISIT US AT: www.NETL.DOE.gov



@NETL_DOE



@NETL_DOE



@NationalEnergyTechnologyLaboratory

CONTACT:

Mark Render

Project Manager, Enabling Technologies and Partnerships

304-285-1621

mark.render@netl.doe.gov

Sydni Credle, Ph.D., P.E.

Technology Manager, University Training and Research

304-285-5255

sydni.credle@netl.doe.gov



Thank you for attending the 2020 HBCU-OMI Fossil Energy Webinar



Solutions for Today | Options for Tomorrow