

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • DECEMBER 2022

Welcome Message

Greetings NETL RWFI stakeholders,

This month's funding opportunity in focus is the Environmental Protection Agency's *FY23 Guidelines for Brownfields Training, Research, and Technical Assistance Grant*, which authorizes funding to eligible entities to provide training, research, and technical assistance to facilitate the inventory of brownfield sites, site assessments, remediation of brownfield sites, community involvement or site preparation.

As always, feel free to reach out to us at NETL.RWFI@netl.doe.gov if you have any suggestions for information to present in future E-notes.

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— Sincerely, The NETL Regional Workforce Initiative Team

Workforce Funding Announcements

FUNDING SPOTLIGHT



FY23 Guidelines for Brownfields Training, Research, and Technical Assistance Grant

Environmental Protection Agency (EPA), Deadline, Feb. 14, 2023

The EPA's Office of Brownfields and Land Revitalization (OBLR) is soliciting applications for funding under Section 104(k)(7) of the Comprehensive Environmental Response, Compensation, and Liability Act, which authorizes funding to eligible entities to provide training, research and technical assistance to facilitate the inventory of brownfield sites, site assessments, remediation of brownfield sites, community involvement or site preparation. Grants awarded under this solicitation will help communities, organizations, government agencies, nonprofits and individuals tackle the challenge of cleaning up and revitalizing brownfield properties.

Louis Stokes Alliances for Minority Participation (LSAMP) National Coordination Hub and Louis Stokes Community Resource Centers

National Science Foundation, Deadline, Jan. 9, 2023

This new solicitation from LSAMP calls for proposals for an LSAMP National Coordination Hub and for Louis Stokes Community Resource Centers. These new funding opportunities will support the overall goal of the LSAMP program to assist universities and colleges in diversifying the nation's STEM workforce by increasing the number of STEM baccalaureate and graduate degrees awarded to individuals from the following populations: Blacks and African Americans, Alaska Natives, American Indians, Hispanic and Latino Americans, Native Hawaiians and Native Pacific Islanders.

Advancing Informal STEM Learning (AISL)

National Science Foundation, Deadline, Jan. 11, 2023

The AISL program is committed to funding research and practice, with continued focus on investigating a range of informal STEM learning experiences and environments that make lifelong learning a reality. This program seeks proposals that center around equity and belonging, furthering the well-being of individuals and communities which have historically been underserved or underrepresented due to gender, race, ethnicity, sexual orientation, disability status, neurodiversity, geographic location and economic status. The current solicitation encourages proposals from institutions and organizations that serve public audiences and specifically focus on public engagement with and understanding of STEM. This includes community STEM, public participation in scientific research, science communication, intergenerational STEM engagement and STEM media.

Improving Undergraduate STEM Education: Directorate for STEM Education (IUSE:EDU)

National Science Foundation, Deadline, Jan. 18, 2023

The National Science Foundation (NSF) plays a leadership role in developing and implementing efforts to enhance and improve STEM education in the United States. Through the NSF IUSE initiative, the agency continues to make a substantial commitment to the highest caliber undergraduate STEM education through a foundation-wide framework of investments. The IUSE: EDU is a core NSF STEM education program that seeks to promote novel, creative and transformative approaches to generating and using new knowledge about STEM teaching and learning to improve STEM education for undergraduate students. The program is open to applications from all institutions of higher education and associated organizations. NSF places high value on educating students to be leaders and innovators in emerging and rapidly changing STEM fields as well as educating a scientifically literate public. In pursuit of this goal, IUSE: EDU supports projects that seek to bring recent advances in STEM knowledge into undergraduate education. These projects will

adapt, improve and incorporate evidence-based practices into STEM teaching and learning, as well as lay the groundwork for institutional improvement in STEM education. In addition to innovative work at the frontier of STEM education, this program also encourages replication of research studies at different types of institutions and with different student bodies to produce deeper knowledge about the effectiveness and transferability of findings.

YouthBuild

Department of Labor, Deadline, Feb. 7, 2023

Under the YouthBuild funding opportunity announcement (FOA), the Department of Labor will award grants through a competitive process to organizations providing pre-apprenticeship services that support education, occupational skills training and employment services to young people between the ages of 16 and 24 while performing meaningful service work to their communities. The YouthBuild program model prepares participants for quality jobs in a variety of careers, including infrastructure and contains wraparound services such as mentoring, trauma-informed care, personal counseling and employment — all key strategies for addressing community violence. YouthBuild applicants must include construction skills training and may list occupational skills training in other in-demand industries. This expansion into additional in-demand industries is the construction plus component, a priority in this grant competition.

Science of Learning and Augmented Intelligence (SL)

National Science Foundation, Deadline, Feb. 8, 2023

SL supports potentially transformative research that develops basic theoretical insights and fundamental knowledge about principles, processes and mechanisms of learning, as well as augmented intelligence — how human cognitive function can be augmented through interactions with others or with technology, or through variations in context.

Improving Undergraduate STEM Education: Hispanic-Serving Institutions (HSIs)

National Science Foundation, Deadline, Feb. 8, 2023

The goals of the HSI program are to enhance the quality of undergraduate STEM education and to increase the recruitment, retention and graduation rates of students pursuing associate or baccalaureate degrees in STEM. Achieving these, given the diverse nature and context of the HSIs, requires additional strategies that support building capacity at HSIs through innovative approaches. These include incentivizing institutional and community transformation and promoting fundamental research on engaged student learning. The program will focus on diversifying and increasing participation in STEM effectively, which will improve our understanding of how to build institutional capacity at HSIs. Intended outcomes of the HSI program include broadening participation of students that are historically underrepresented in STEM, expanding students' pathways to continued STEM education and integration into the STEM workforce.

Industrial Assessment Center Program — Centers of Excellence

Department of Energy, Deadline, Feb. 17, 2023

The Office of Manufacturing and Energy Supply Chains (MESO) is issuing this restricted eligibility FOA to establish up to five regional Centers of Excellence at existing Industrial Assessment Centers (IACs) to coordinate with and advise IACs located in the regions of the Centers of Excellence. DOE expects to make a total of up to \$18.75M of federal funding available for three to five awards under this FOA, subject to the availability of appropriated funds. However, DOE may issue one, multiple or no awards. Individual awards are anticipated to be for \$2.5M to \$3.75M each over a five-year performance period. Awards made under this FOA will be funded, in whole or in part, with funds appropriated by the Bipartisan Infrastructure Law (BIL).

Training-based Workforce Development for Advanced Cyberinfrastructure (CyberTraining)

National Science Foundation, Deadline, Feb. 23, 2023

This program seeks to prepare, nurture and grow the national scientific research workforce for creating, utilizing and supporting advanced cyberinfrastructure (CI) to enable and potentially transform fundamental science and engineering (S&E) research and education as well as contribute to the nation's overall economic competitiveness and security. This solicitation aims to ensure broad adoption of CI tools, methods and resources by the research community in order to catalyze major research advances and to enhance researchers' abilities to lead the development of new CI. It also seeks to integrate core literacy and discipline-appropriate advanced skills in advanced CI as well as computational and data-driven methods for advancing fundamental research into the nation's undergraduate and graduate educational curriculum/instructional materials. Proposals responding to this solicitation may target one or both of the two solicitation goals. For the purpose of this solicitation, advanced CI is broadly defined as the set of resources, tools, methods and services for advanced computation. It also includes large-scale data handling and analytics, along with networking and security for large-scale systems that collectively enable potentially transformative fundamental S&E research and education.

EHR Core Research: Building Capacity in STEM Education Research (ECR: BCSEER)

National Science Foundation, Deadline, Feb. 24, 2023

ECR: BCSEER supports projects that build investigators' capacity to carry out high-quality STEM education research that will enhance the nation's STEM education enterprise. In addition, ECR: BCSEER seeks to broaden the pool of researchers who can advance knowledge regarding STEM learning and learning environments, broadening participation in STEM fields and STEM workforce development. Researchers of races and ethnicities, genders, sexual orientations and abilities who are currently underrepresented in their participation in STEM education research and the STEM workforce, as well as faculty at minority-serving and two-year institutions, are particularly encouraged to submit proposals.

NETL News



DOE Invests Over \$5M to Help Secure Domestic Supply Chain for Critical Minerals to Support Development of Clean Energy Technologies

The DOE Office of Fossil Energy and Carbon Management (FECM) and NETL announced \$5.3M in funding for five cutting-edge projects that will advance research supporting the domestic production of rare earth elements and other critical minerals.



Biden-Harris Administration Announces \$3.7 Billion to Kick-start America's Carbon Dioxide Removal Industry

As part of this overall effort, DOE will invest \$3.5 billion to develop four domestic regional direct air capture hubs. Each hub will demonstrate a direct air capture technology at commercial scale with the potential for capturing at least one million metric tons of CO₂ annually from the atmosphere and storing that CO₂ permanently in a geologic formation or through its conversion into products. The first FOA under this program makes available more than \$1.2 billion to begin the process for conceptualizing, designing, constructing and operating direct air capture hubs. This FOA will support the Biden Administration's goals to create good-paying union jobs to build a modern and sustainable infrastructure, deliver an equitable, clean energy future and put the United States on a path to achieve net-zero emissions by 2050.



DOE Announces Up to \$20M Available for Regional Projects to Accelerate U.S. Carbon Capture, Transport, Conversion, and Storage Technology Deployment

DOE FECM and NETL announced \$20M in funding for projects that will improve stakeholder access to region-specific information and technical assistance regarding the commercial deployment of carbon

capture, transport, conversion and storage technologies across the United States.



NETL Carbon Capture Team Visits Renowned National Facility Where Technologies Are Put to the Test

When your research team's focus is to develop the next generation of advanced CO₂ capture concepts to achieve the goal of a carbon-pollution-free power sector by 2035, a visit to a renowned facility where colleagues have completed more than 129,000 hours of technology testing is like a trip to a carbon capture hall of fame.



Electric Vehicle Ecosystem in Appalachia Advancing with NETL Support

NETL project partners Tennessee Technological University, the West Virginia Clean Cities Program and the National Alternative Fuels Training Consortium of the West Virginia University Energy Institute, are reimagining transportation in rural America by working to build an electric vehicle ecosystem in Appalachia, and these efforts recently took a crucial step forward in Marion County, West Virginia.



Publication details “Inner Workings” of DOE’s Produced Water Optimization Framework, Produced Water Application for Beneficial Reuse, Environmental Impact and Treatment Optimization (PARETO)

Two DOE national laboratories that teamed up to provide an award winning, open-source software tool that can identify the best ways to manage, treat and — when possible — reuse produced water from oil and gas operations, have published a framework manuscript providing insights about how the project can offer environmentally sustainable and lower-cost approaches for handling oil and gas wastewater. NETL and Lawrence Berkeley National Laboratory reached a development milestone with the publication of a framework manuscript describing PARETO, a cutting-edge program designed to help organizations recognize opportunities for minimizing fresh and brackish water consumption in active oil and gas development areas.



Senior NETL Researcher Preps Tomorrow’s Engineers, Scientists to Make Impact

NETL’s Thomas Sarkus demonstrated the importance of giving back to ensure the next generation of engineers and scientists is prepared to advance crucial energy technologies when he addressed students at Southern Illinois University Carbondale. At a seminar held at the university’s College of Engineering, Computing, Technology & Mathematics, Sarkus summarized lessons learned from technology demonstration projects, as well as future directions in fossil energy and carbon management technologies, including those that have been funded by the Biden Administration’s Bipartisan Infrastructure Law.



DOE Seeks Information on Regional and National CO₂ Transport Infrastructure

The DOE released a Request for Information (RFI) on Dec. 1, 2022, to obtain input for implementing Future Growth Grants under the CO₂ Transportation Infrastructure Finance and Innovation program established under the BIL. NETL is collecting the responses to the RFI.



DOE Seeks Information on Developing Carbon Storage Field Laboratories

The DOE released a RFI on Dec. 1, 2022, to obtain input on the best approaches and options for developing field laboratories, whether at Carbon Storage Assurance Facility Enterprise initiative project sites or other sites. NETL is collecting the responses to the RFI.

Reports and Resources



How Adaptive Skills Can Play a Pivotal Role in Building the Manufacturing Sector of the Future

The Manufacturing Institute

There is a need for broader and evolving skillsets in the manufacturing sector and for building a workforce motivated by opportunities for growth. Doing this will help manufacturers transition workplaces to a point where forward-thinking, engaging and digitally enabled work is the norm. This new research from The Manufacturing Institute and Ernst & Young focus on adaptive skills in the manufacturing workplace.

The Manufacturing Experience: Closing the Gender Gap

The Manufacturing Institute

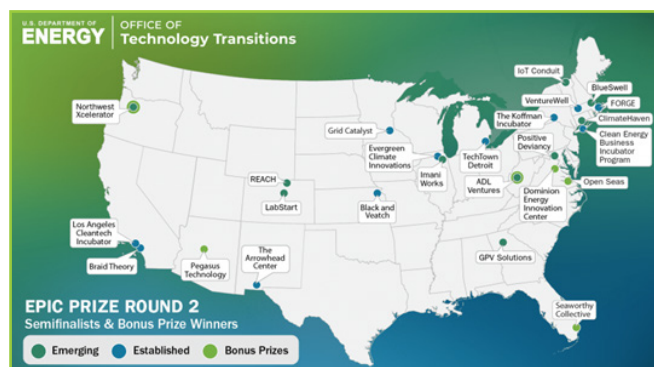
By embracing the diversity of its employee base, companies can positively shape their company's culture, which can be attractive for identifying and retaining workers. In addition, by highlighting successful women at their companies, their female employees have become important role models for other existing and prospective workers, and these efforts go a long way toward conveying the importance of diversity and differing perspectives to the company's overall culture and to the bottom line.

Gaps in the Energy Workforce Report

Center for Energy Workforce Development

In 2021, the Center for Energy Workforce Development conducted the ninth Gaps in the Energy Workforce Pipeline survey. This survey has been conducted bi-annually for the past 15 years to help analyze the changes occurring in the workforce within the energy sector.

DOE STEM Rising



DOE Awards \$1.3M to Incubators and Accelerators in Support of Place-Based Energy Innovation

The DOE has named the semifinalists in the *American-Made Energy Program for Innovation Clusters* Prize round two. Twenty-four incubators and accelerators across the country were each awarded \$50k in cash prizes for their high-impact ideas that support energy start-ups and entrepreneurs. The three-phase, year-long competition was designed by the DOE Office of Technology Transitions (OTT) to support robust energy innovation ecosystems as a means of increasing local business productivity, improving the commercial success of start-ups and driving the pace of regional innovation.

DOE OTT Launches Technology Commercialization Internship

DOE OTT announces that its Summer Entrepreneurship Program will now be known as the *Technology Commercialization Internship*. With this change, OTT is also opening the *application period* for its third cohort of this program. Changing the name of this program provides a more clear and accessible description of its function and purpose, which OTT hopes will increase outreach and expand engagement from undergraduate students at technical community colleges and universities.



Demystifying Science, Energy Jobs to Attract Students to STEM Careers

Kristen Ellis, director of regulatory, intergovernmental and stakeholder engagement for the DOE Office of Environmental Management, recently participated in a virtual event to discuss how communities in and around the *Hanford site* can build on its nuclear expertise to create STEM opportunities for the future workforce.

ABOUT NETL



NETL, owned and operated by DOE, is one of the Department's 17 National Laboratories. NETL supports DOE's mission to advance the national, economic, and energy security of the United States.

1450 Queen Avenue SW
Albany, OR 97321-2198
541-967-5892

3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880
304-285-4764

626 Cochran Mill Road
P.O. Box 10940
Pittsburgh, PA 15236-0940
412-386-4687

Program staff are also located in
Houston, Texas and Anchorage, Alaska

WEBSITE: www.netl.doe.gov

CONTACTS

Anthony Armaly
NETL RWFI Federal Coordinator
412-386-6040
Anthony.Armaly@netl.doe.gov

Kirk Gerdes
Regional Workforce Initiative Coordinator
304-285-4342
Kirk.Gerdes@netl.doe.gov

Mike Knaggs
Associate Director of Partnerships
304-285-4926
Michael.Knaggs@netl.doe.gov

Matthew Garcia
Regional Workforce Initiative Consultant
956-314-0645
Matthew.Garcia@netl.doe.gov

