

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • DECEMBER 2023

Welcome Message

Greetings NETL RWFI stakeholders,

This month's funding opportunity in focus is from the U.S. Department of Labor's *YouthBuild* program focusing on pre-apprenticeship skills training in construction and other in demand industries. This funding opportunity has a deadline of Feb. 1, 2024.

In the DOE STEM section of this month's e-note is the announcement of a new prize opportunity concentrating on the *circular economy and fortifying supply chains*. The three phase award will have a total of \$4.5M in cash prizes and \$1.1M in national laboratory analysis consultation and technical assistance.

Also in the DOE STEM section is the launch of the Department of Fossil Energy and Carbon Management's *University Training Research Blog*, which will spotlight participants in the University Training and Research program.

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— Sincerely, The NETL RWFI Team

skills training and may include occupational skills training in other in-demand industries.

Tribal Colleges and Universities Program (TCUP)

National Science Foundation, Deadline, Jan. 10, 2024

TCUP provides awards to federally recognized Tribal Colleges and Universities, Alaska Native-serving institutions, and Native Hawaiian-serving institutions to promote high quality STEM education (including sociology, psychology, anthropology, linguistics, economics and bioeconomics, statistics, and other social and behavioral sciences; natural sciences; computer science, including, but not limited to, artificial intelligence, quantum information science, and cybersecurity), research, and outreach. Support is available to TCUP-eligible institutions for transformative capacity-building or community engagement projects through Instructional Capacity Excellence in TCUP Institutions; Targeted STEM Infusion Projects; TCUP for Secondary and Elementary Teachers in STEM; TCU Enterprise Advancement Centers; Cyberinfrastructure Health, Assistance, and Improvements; and Preparing for TCUP Implementation.

Solar-thermal Fuels and Thermal Energy Storage via Concentrated Solar-thermal Energy

Department of Energy, Deadline, Jan. 12, 2024

This FOA will implement two approaches to energy storage in concentrated solar-thermal systems: thermochemical storage via solar fuel production and local thermal energy storage for dispatchable energy. The two technologies will support the government-wide approach to the climate crisis by driving the innovation that can lead to the deployment of clean energy technologies, which are critical for climate protection.

Challenges and Opportunities at the interface of Wind Energy and Radar Technology

Department of Energy, Deadline, Jan. 12, 2024

The purpose of this request for information (RFI) is to solicit public feedback to help inform DOE's implementation of the Infrastructure Investment and Jobs Act, also commonly known as the Bipartisan Infrastructure Law (BIL). To help inform DOE's implementation of BIL funds under the provision referenced above, this RFI seeks input on siting challenges of wind energy developers related to radar interference, potential mitigation technologies at the radar and/or turbine level that currently exist or are in development to address wind turbine-radar interference, commercialization and market adoption of wind-radar interference mitigation measures, and what obstacles need to be overcome to accelerate commercialization and maximize adoption, and BIL Provisions and Requirements and Buy America Requirements.

Workforce Funding Announcements

FUNDING SPOTLIGHT



YouthBuild

Department of Labor, Deadline, Feb. 1, 2024

Under this 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 opportunity youth, ages 16 to 24, who are performing meaningful work and service to their communities. The YouthBuild program model prepares participants for quality jobs in a variety of careers, in diverse industry sectors, particularly in infrastructure sectors, and includes wrap-around services such as mentoring, trauma-informed care, personal counseling, transportation supports, and employment preparation—all key strategies for addressing violence in communities. YouthBuild applicants must include construction

Training-based Workforce Development for Advanced Cyberinfrastructure (CI)

National Science Foundation, Deadline, Jan. 18, 2024

This program seeks to prepare, nurture, and grow the national scientific research workforce for creating, utilizing, and supporting advanced CI to enable and potentially transform fundamental science and engineering research and education and contribute to the nation's overall economic competitiveness and security. The goals of this solicitation are 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 and 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.

RFI DE-FOA-0003251: Clean Energy Careers for All Program

Department of Energy, Deadline, Jan. 26, 2024

The Biden Administration is committed to ensuring that overburdened, underserved, and underrepresented individuals and communities have access to federal resources, and specifically that 40% of the overall benefits of certain federal investments flow to disadvantaged communities, as described in its Justice40 Initiative. The clean energy transition should advance equity for people of color, people with disabilities, and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality. Advancing equity, civil rights, racial justice, and equal opportunity is the responsibility of the entire government. As part of the whole of government approach, DOE is taking proactive steps to lower barriers to entry. The Office of Energy Efficiency and Renewable Energy supports research, development, demonstration, and deployment (RDD&D) of renewable energy and energy efficiency technologies. DOE funds RDD&D activities in climate and energy technologies through a variety of mechanisms, including external competitive solicitations and through its 17 national laboratories. In addition, DOE programs support building and sustaining an innovation ecosystem for climate and energy technologies, encompassing early career and workforce development, entrepreneurial programs and resources for individuals and organizations, and technical and financial assistance for communities and regions. The purpose of this RFI is to solicit public feedback about issues related to educational and professional development programming—created and delivered by diverse science and engineering non-profits—that inspires students, alumni, and professionals to explore, pursue, and succeed in STEM-related careers in clean energy.

DE-FOA-0003138 Notice of Intent (NOI) to Issue FOA No. DE-FOA-0003139 - Distributed Energy Systems Demonstrations

Department of Energy, Deadline, Jan. 29, 2024

The Office of Clean Energy Demonstrations intends to issue a FOA entitled "Distributed Energy Systems Demonstrations Funding Opportunity Announcement." The goal of this new investment area is to support demonstrations that de-risk technologies needed to manage variable generation; control flexible loads; and integrate energy storage, electric vehicle charging, and other facilities into the

U.S. transmission and distribution grids.

Enabling a Reduced Carbon Footprint for CO₂ Enhanced Oil Recovery (CO₂-EOR)/Storage Field Test Sites in Unconventional Reservoirs

National Science Foundation, January 18, 2024

This program seeks to prepare, nurture, and grow the national scientific research workforce for creating, utilizing, and supporting advanced CI to enable and potentially transform fundamental science and engineering research and education and contribute to the nation's overall economic competitiveness and security. The goals of this solicitation are 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 and 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.

Mathematical Sciences Infrastructure Program

Department of Energy, January 26, 2024

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Hispanic-Serving Institutions (HSIs) Education Grants Program

Department of Energy, January 29, 2024

The Office of Clean Energy Demonstrations intends to issue a FOA entitled "Distributed Energy Systems Demonstrations Funding Opportunity Announcement." The goal of this new investment area is to support demonstrations that de-risk technologies needed to

manage variable generation; control flexible loads; and integrate energy storage, electric vehicle charging, and other facilities into the U.S. transmission and distribution grids.

Women and Minorities in STEM Fields Program

Department of Energy, January 29, 2024

This funding opportunity announcement supports the DOE by investing in research through a field laboratory well, or wells, established in collaboration with industry and academic research partners to expand public understanding of the overall effectiveness of CO₂ EOR in unconventional oil reservoirs, the possibility of combining EOR and associated CO₂ storage in horizontal, hydraulically fractured unconventional oil wells, and the potential for combining EOR and associated CO₂ storage in a manner that results in a reduced carbon footprint oil classification for the incremental oil produced, aligned with the Administration's "net zero" carbon economy 2050 goal.

Science of Learning and Augmented Intelligence (SL)

National Science Foundation, Deadline, Feb. 14, 2024

SL supports potentially transformative research that develops basic theoretical insights and fundamental knowledge about principles, processes and mechanisms of learning, and about 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: HSLs

National Science Foundation, Deadline, Feb. 14, 2023

The goals of the HSL program are to enhance the quality of undergraduate STEM education and to increase the recruitment, retention, and graduation rates of students pursuing associate's or baccalaureate degrees in STEM.

BIL: Storage, Validation and Testing (Section 40305): Carbon Storage Assurance Facility Enterprise (CarbonSAFE): Phases III, III.5, and IV

Department of Energy, Deadline, Feb. 20, 2024

This FOA will support the availability of Carbon Capture, Utilization, and Storage (CCUS) and CO₂ removal to reach climate goals by building upon these learnings to test, mature, and validate CCUS technologies at commercial-scale. One aspect is the need to improve practices regarding how to efficiently and cost-effectively characterize and permit commercial carbon storage project site(s) ensuring that secure geologic carbon storage is available in diverse regions and settings that will support longer term carbon management goals across the United States.

DE-FOA-0003132 BIL 40513: Career Skills Training

Department of Energy, Deadline, Feb. 27, 2024

This modification also clarifies the definition of "eligible applicants" as well as provides clarification on the Community Benefits Plan template. The Career Skills Training Program will provide grants to eligible entities to pay the Federal share of Career Skills Training Programs under which students concurrently receive classroom instruction and on-the-job training for the purpose of obtaining an industry-related

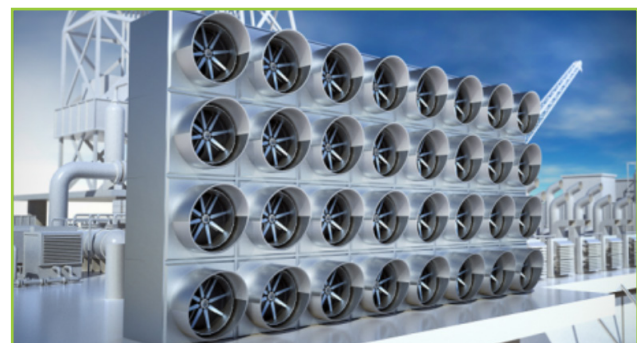
certification to install energy efficient building technologies.

NETL News



DOE Carbon Storage, Validation and Testing Program Opens for a Third Round of Funding

The DOE's Office of Fossil Energy and Carbon Management (FECM) announced the third opening of a five-year \$2.25B funding opportunity available through President Biden's Investing in America agenda to support the transport and permanent storage of CO₂ captured from industrial and power generation facilities, as well as from legacy CO₂ emissions removed directly from the atmosphere.



2023 Sees NETL Begin Testing at direct air capture (DAC) Center and Launching Other CO₂ Removal Projects

Throughout 2023, NETL has taken steps to advance DAC technologies to remove CO₂ and other greenhouse gases from the atmosphere, a vital step in achieving decarbonization in addition to carbon capture from emission sources.



DOE Plans to Invest in Carbon Conversion and Highly Efficient CO₂ Capture Technologies

The FECM today issued a NOI to provide funding in support of two carbon management priorities—the conversion of CO₂ into environmentally responsible and economically feasible products, and the capture of CO₂ from fossil energy-fueled power plants and industrial sources.



NETL Enters Pipeline Sensor Collaboration with Colonial Pipeline Company

NETL and Alpharetta, Georgia-based Colonial Pipeline Company (the largest pipeline system for refined oil products in the United States, ranging from Texas to New York), have signed a cooperative research and development agreement. As a result, field demonstrations of optical fiber sensor systems developed at NETL on Colonial's fuel pipeline will continue—in the hopes of progressing technology that enhances the safety and security of pipeline operations through leak detection.



DOE Invests \$10M to Treat Wastewater, Recover Valuable Minerals

The FECM today announced the selection of four R&D projects to receive nearly \$10M for the treatment and management of produced water—or wastewater associated with oil and natural

gas development and production—and the management of legacy wastewater associated with coal-based thermal electric power generation facilities.



Latest Edition of NETL Edge Is Now Available

NETL has released the latest edition of its semiannual publication that showcases research on emerging energy technologies. NETL Edge shares the latest developments in the lab's mission to drive innovation and deliver solutions for an environmentally sustainable and prosperous energy future.

Reports and Resources



World Energy Employment (WEE) 2023

International Energy Agency

The second edition of the WEE report tracks the evolutions of the energy workforce from before the pandemic, through the global energy crisis, to today. The report provides a comprehensive stock-take of energy employment with estimates of the size and distribution of the labor force across regions, sectors, and technologies. The dataset provides granularity on workers along the entire energy value chain, covering fossil fuel supply, bioenergy, nuclear, low-emissions hydrogen, power generation, transmission, distribution, and storage; and key energy-related end uses, including vehicle manufacturing and energy efficiency for buildings and industry, among other segments. Additionally, WEE 2023 includes for the first-time employment data for the extraction of selected critical minerals, including copper, cobalt, nickel and lithium.

DOE STEM Rising

Five Teams Win Phase One of DOE Prize to Accelerate Equitable Clean Energy Solutions in Underserved Communities

The DOE today announced five teams as CONCEPT Phase winners in the Collegiate Track of the American-Made Community Energy Innovation Prize. They were selected for their student-led activities that help ensure the benefits of clean energy are felt in local underserved communities.

DOE Launches a Circular Economy Prize to Fortify Supply Chains for the American Sustainable Goods Economy

The DOE announced the launch of its newest clean energy prize, the “Re-X Before Recycling” Prize. This three-phase prize will award a total of \$4.5M in cash prizes and \$1.1M in national laboratory analysis consultation and technical assistance to teams that develop innovative ways to extend the lifetimes of products or parts via re-using, repairing, refurbishing, remanufacturing, or repurposing (“Re-X”) before recycling.

Meet FECM’s 2023 University Training and Research (UTR) Participants

The FECM is investing in the education and training of the United States’ future scientists and engineers through its UTR program. This program is supporting early-stage research at U.S. colleges and universities, helping to advance FECM’s mission of minimizing the environmental and climate impacts of fossil fuels and industrial processes while working to achieve net-zero emissions across the U.S. economy.

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.

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