

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • MAY 2022

Welcome Message

Greetings NETL RWFI stakeholders,

This month's funding opportunity in focus is the Department of Labor's *Workforce Opportunity for Rural Communities (WORC): A Grant Initiative for the Appalachian and Delta Regions* funding opportunity, with a deadline of July 8, 2022. The purpose of the WORK grants is to, "create economic mobility, address historic inequities for marginalized communities of color and other underserved and underrepresented communities, and produce high-quality employment for workers who reside in the Appalachian and Delta regions, enabling them to remain and thrive in these communities".

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



Workforce Opportunity for Rural Communities (WORC): A Grant Initiative for the Appalachian and Delta Regions

Department of Labor, Deadline, July 8, 2022

The Employment and Training Administration (ETA), U.S. Department of Labor (DOL) announces the availability of approximately \$34.2M in grant funds authorized by the Workforce Innovation and Opportunity Act (WIOA) for the fourth round of Workforce Opportunity for Rural Communities (WORC) Initiative demonstration grants. The purpose of this grant opportunity is to create economic mobility, address historic inequities for marginalized communities of color and other underserved and underrepresented communities, and produce high-quality employment for workers who reside in the Appalachian and Delta regions, enabling them to remain and thrive in these communities. The WORC Initiative provides funding to eligible applicants proposing to meet this goal with a project addressing the employment and training needs of the local and regional workforce, created in collaboration with community partners and aligned with existing economic and workforce development plans and strategies.

Tribal Colleges and Universities Program (TCUP)

National Science Foundation, Deadline, June 1, 2022

The TCUP provides awards to federally recognized Tribal Colleges and Universities, Alaska Native-serving institutions, and Native Hawaiian-serving institutions to promote high quality science. Subjects include 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; and STEM education, 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; Tribal College and University Enterprise Advancement Center; Cyberinfrastructure Health, Assistance, and Improvements; and Preparing for TCUP Implementation. Collaborations led by TCUP institutions that involve non-TCUP institutions of higher education are supported through TCUP Partnerships, with the participation of other NSF programs to support the work of non-TCUP institutions. Finally, research studies that further the scholarly activity of individual faculty members are supported through Small Grants for Research.

Strengthening Community Colleges (SCC2) Training Grants

Department of Labor, Deadline, June 2, 2022

This funding opportunity announcement (FOA) solicits applications for the second round of SCC2 Training Grants. For the purposes of this FOA, this training initiative has two parts: the standard program grants will be referred to as SCC2 Program Grants, and the additional evaluation funds will be referred to as Additional SCC2 Evaluation Funding. The purpose of this program is to address two inter-related needs: 1) to increase the capacity and responsiveness of community colleges to address identified equity gaps, and 2) to meet the skill development needs of employers in in-demand industries and career pathways, as well as the skill development needs of underserved and underrepresented workers.

Office of Postsecondary Education: Higher Education Programs: Developing Hispanic-Serving Institutions (DHSI) Program, Assistance Listing Number 84.031S

Department of Education, Deadline, June 6, 2022

The DHSI Program provides grants to assist Hispanic Serving Institutions (HSIs) with expanding educational opportunities for, and improving the academic attainment of, Hispanic students. The DHSI Program grants enable HSIs to expand and enhance the academic offerings, program quality, faculty quality, and institutional stability of colleges and universities that are educating the majority of Hispanic college students and helping large numbers of Hispanic students and other low income individuals complete postsecondary degrees.

Industry-University Cooperative Research Centers (IUCRC) Program

National Science Foundation, Deadline, June 8, 2022

The IUCRC program catalyzes breakthrough pre-competitive research by enabling close and sustained engagement between industry innovators, world-class academic teams, and government agencies. IUCRCs help industry partners and government agencies connect directly and efficiently with university researchers to achieve three primary objectives: 1) conduct high-impact research to meet shared and critical industrial needs in companies of all sizes; 2) enhance U.S. global leadership in driving innovative technology development; and 3) identify, mentor, and develop a diverse, highly skilled science and engineering workforce.

Office of Postsecondary Education (OPE): Higher Education Programs (HEP): Veterans Upward Bound (VUB) Program, Assistance Listing Number (ALN) 84.047V

Department of Education, Deadline, June 10, 2022

The Upward Bound (UB) Program is one of the seven programs collectively known as the Federal TRIO Programs. The UB Program is a discretionary grant program that supports projects designed to provide students with the skills and motivation necessary to complete a program of secondary education and enter into and succeed in a program of postsecondary education. There are three types of grants under the UB Program: UB, VUB, and UB Math and Science. In this notice we invite applications for VUB grants only. The invitation to apply for UB grants was published in the Federal Register on December 16, 2021, and is available at <https://www.federalregister.gov/documents/2021/12/16/2021-27235/applications-for-new-awards-upward-bound-program>. We will invite applications for UB Math and Science grants in a separate notice.

2022 Build to Scale Program

Economic Development Agency, Deadline, June 13, 2022

The Build to Scale Program invites organizations who are aiding companies in developing the next generation of technologies to apply for funding. These organizations may be operating initiatives to unlock investment capital across a region or sector, operating programs to accelerate company growth, empowering the next generation of entrepreneurs, and/or enabling technology commercialization. Under the Build to Scale Program, EDA is soliciting applications for two separate competitions: (1) the Venture Challenge, and (2) the Capital Challenge. Applicants must provide a matching share from non-Federal sources of at least 50 percent of the total project cost; i.e., applicants must match each Federal dollar requested with at least one dollar of local match.

Office of Postsecondary Education (OPE): Higher Education Programs (HEP): Fund for the Improvement of Postsecondary Education (FIPSE): Centers of Excellence for Veteran Student Success (CEVSS) Program, Assistance Listing Number (ALN) 84.116G

Department of Education, Deadline, June 16, 2022

The purpose of this program is to encourage institutions of higher education (IHEs) to develop model programs to support veteran student success in postsecondary education by coordinating services

to address the academic, financial, physical, and social needs of veteran students.

Leadership for the Employment and Economic Advancement of People with Disabilities Workforce Innovation and Opportunity Act Policy Development Center

Department of Labor, Deadline, June 17, 2022

The Office of Disability Employment Policy (ODEP), U.S. Department of Labor (DOL) is announcing the availability of approximately \$2M in grant funds authorized by the Consolidated Appropriations Act, 2022 (Public Law 117-103) for the operation of the Leadership for the Employment and Economic Advancement of People with Disabilities Workforce Innovation and Opportunity Act Policy Development Center (LEAD WIOA PDC). The entity selected to operate the LEAD WIOA PDC will continue and build upon the work of the existing LEAD WIOA PDC, called the LEAD Center, to work across the full range of workforce systems to develop policies and provide technical expertise that increases competitive integrated employment (CIE) services, opportunities, and outcomes for individuals with disabilities.

Science of Learning and Augmented Intelligence (SL)

National Science Foundation, Deadline, July 13, 2022

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, contextual variations, and technological advances.

CyberCorps Scholarship for Service

National Science Foundation, Deadline, July 15, 2022

Cyberspace has transformed the daily lives of people throughout the world. Society's overwhelming reliance on cyberspace, however, has exposed the system's fragility and vulnerabilities: corporations, agencies, national infrastructure, and individuals continue to suffer cyberattacks. Achieving a truly secure cyberspace requires addressing both challenging scientific and engineering problems involving many components of a system, and vulnerabilities that stem from human behaviors and choices. Examining the fundamentals of security and privacy as a multidisciplinary subject can lead to fundamentally new ways to design, build, and operate cyber systems, protect existing infrastructure, and motivate individuals to learn about cybersecurity. The Cybersecurity Enhancement Act of 2014, as amended by the National Defense Authorization Acts for 2018 and 2021, authorizes the National Science Foundation, in coordination with the U.S. Office of Personnel Management and the Department of Homeland Security, to offer a scholarship program to recruit and train the next generation of American cybersecurity professionals to meet the needs of the cybersecurity mission for federal, state, local, and tribal governments.

Agriculture and Food Research Initiative Sustainable Agricultural Systems (SAS) Applications

Department of Agriculture, Deadline, July 28, 2022

SAS Request for Applications must focus on approaches that promote transformational changes in the U.S. food and agriculture system. The National Institute of Food and Agriculture seeks creative and visionary applications that take a systems approach for projects which are expected to significantly improve the supply of affordable, safe, nutritious, and accessible agricultural products, while fostering economic development and rural prosperity in the United States. These approaches must demonstrate current needs and anticipate future social, cultural, behavioral, economic, health, and environmental impacts. Additionally, the outcomes of the work being proposed should result in societal benefits, including promotion of rural prosperity and enhancement of quality of life for all those involved in food and agricultural value chains from production to utilization and consumption.

of sustainable energy technologies and the organizational structure that supports and advances its research activities during a meeting with up-and-coming leaders of the national lab system. On Monday, May 9, NETL held a virtual discussion with representatives of the U.S. Department of Energy’s (DOE) national labs who were selected to participate in the Oppenheimer Science and Energy Leadership Program (OSELP) 2022 Cohort. “OSELP is a distinguished fellows program that brings together exceptional leaders to explore the complexities, challenges and opportunities facing the national lab system and DOE. It was an honor and tremendous opportunity for NETL to share our insights with this elite group,” said NETL Director Brian Anderson.



NETL, Partners Take ‘NExT’ Steps to Develop National Experimental Turbine

The project team developing the National Experimental Turbine (NExT), an initiative advanced with NETL support and oversight, has surpassed several key milestones as it builds a first-of-its-kind testing platform for manufacturing a new generation of higher-efficiency gas turbines. Gas turbines play an important role in U.S. energy security and represent a critical technology for energy conversion, with broad uses for combined cycle power plants, aircraft propulsion, and backup power generation for renewable energy plants and hospitals. Technological strides in turbine development can have wide-reaching economic and environmental benefits. According to data presented at the 2019 American Society of Mechanical Engineers TurboExpo, a one-point U.S turbine efficiency improvement, in terms of carbon reduction, is equivalent to eliminating the emissions from 2 million cars.



NETL Director Details Hydrogen Prospects at MITEI Spring Symposium 2022

NETL Director Brian Anderson, Ph.D., addressed participants of the virtual 2022 Spring Symposium of the Massachusetts Institute of Technology Energy Initiative (MITEI) Tuesday, May 10 and highlighted NETL’s ongoing contributions to building a sustainable energy future via hydrogen power generation and carbon capture. The symposium’s theme, “Hydrogen’s Role in a Decarbonized Energy System: How to Enable It,” explored the hydrogen markets, infrastructure, production and policies needed to achieve a future in which the needs of the economy are met by a hydrogen-based power sector - actions essential to meet the administration’s greenhouse gas emission reduction and net zero-carbon economy goals by 2050.

NETL News



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. In this issue, we feature key research and technology development that supports clean energy goals and provisions of the Bipartisan Infrastructure Law (BIL). Check out the newly released edition of NETL Edge to learn more about how NETL is ramping up efforts to transform U.S. energy infrastructure and guiding the path toward U.S. decarbonization. Also featured is the Lab’s Hydrogen Initiative, which is supporting critical BIL investments, NETL’s transition to a net-zero laboratory, and an inside look at developing technologies for attaining net-zero greenhouse gas emissions with NETL’s Neil Kirschner. <https://go.usa.gov/xutvy>



NETL Takes Oppenheimer Fellows on ‘Deep Dive’ into National Lab System

NETL senior officials discussed programs driving the development



NETL to Present Major Projects, Key Initiatives at ARPA-E Energy Innovation Summit

NETL researchers will showcase critical decarbonization projects and important research initiatives at the 12th Advanced Research Projects Agency-Energy (ARPA-E) Energy Innovation Summit May 23-25 in Denver, Colorado. The summit is an annual conference and technology showcase that brings together experts from different technical disciplines and professional communities to think about America’s energy challenges in new and innovative ways. Now in its twelfth year, the summit offers a unique, three-day program aimed at moving transformational energy technologies out of the lab and into the market. “With so much outstanding work going to build a sustainable energy future empowered by legislation like the Bipartisan Infrastructure Law, NETL is excited to return to the ARPA-E Energy Innovation Summit as a technology development partner,” said Mike Knaggs, NETL associate director of research partnerships and technology transfer.



NETL Lab Explores Hybrid Technologies to Reduce Emissions and Increase Power Production Efficiency and Flexibility

For many, the term “hybrid energy technology” may conjure images of gasoline/battery-powered cars. But in one particular NETL research facility, “hybrid energy technology” means innovative energy-producing power technology combinations that can achieve increased efficiency, flexibility, and reduced emissions while meeting America’s energy needs. NETL’s Hybrid Performance (HyPer) facility was created to support U.S. Department of Energy efforts to research highly efficient power generation technologies that can reduce U.S. dependence on foreign sources of oil and other energy feedstocks. HyPer researchers are also focused on achieving the Administration’s goal of zero CO₂ emissions from power generators by 2035. Another “must do” on HyPer’s research checklist is creating an ability to provide the flexibility to accommodate intermittent power fluctuations associated with renewable power resources like wind and solar, leading to a more stable power grid.



NETL Develops Unique Modeling Capabilities Using Cerebras Wafer-Scale Engine

Through a collaboration with one of the world’s leading artificial intelligence (AI) hardware manufacturers, NETL is developing a cutting-edge computer modeling capability using next-generation computer architecture that is much smaller, more energy-efficient, and hundreds of times faster than current supercomputers. Cerebras Systems Inc. designed its revolutionary wafer-scale engine (WSE) to tackle tough AI problems, but NETL’s Dirk Van Essendelft, Ph.D., and his team realized that this new type of computer chip could be used to solve real-world engineering problems.



Biden-Harris Administration Announces Over \$2.3 Billion Investment To Cut U.s. Carbon Pollution

WASHINGTON, D.C. — The U.S. Department of Energy (DOE) today announced more than \$2.3 billion for three efforts to advance diverse carbon management approaches that reduce carbon dioxide (CO₂) pollution, address the impacts of climate change, and create good-paying jobs while prioritizing community engagement and environmental justice. The first is a Notice of Intent (NOI) for \$2.25 billion, funded by the President’s Bipartisan Infrastructure Law, to accelerate geologic carbon storage projects each capable of permanently storing at least 50 million metric tons of captured CO₂ – the equivalent to the emissions from roughly 10 million gasoline-powered cars a year. In addition, DOE issued two funding opportunities, totaling \$91 million, to increase the number of available CO₂ storage sites and to advance critical carbon management technologies. Expanding commercial CO₂ storage capacity and related industries will provide economic opportunities for hard-hit communities and help deliver on President Biden’s goal of a achieving an equitable transition to a net-zero economy by 2050.

Reports and Resources



Call to Action for Science Education

National Academies of Science

Scientific thinking and understanding are essential for all people navigating the world, not just for scientists and other science, technology, engineering and mathematics (STEM) professionals. Knowledge of science and the practice of scientific thinking are essential components of a fully functioning democracy. Science is also crucial for the future STEM workforce and the pursuit of living wage jobs. Yet, science education is not the national priority it needs to be, and states and local communities are not yet delivering high quality, rigorous learning experiences in equal measure to all students from elementary school through higher education.

DOE STEM Rising



Office of Environmental Management Building the STEM Workforce of the Future

EM's fiscal year (FY) 2023 budget request includes \$56 million to expand its Minority Serving Institutions Partnership Program (MSIPP).



Oak Ridge Contractor Employees Recruit Prospective Graduates for EM's Cleanup

EM cleanup contractor UCOR is raising awareness among soon-to-be graduates in higher education about opportunities to work at Oak Ridge

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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