

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • OCTOBER 2023

Welcome Message

Greetings NETL RWFI stakeholders,

This month's funding opportunity in focus is the U.S. Department of Energy's *Bipartisan Infrastructure Law (BIL) Weatherization Program Assistance (WAP) Enhancement & Innovation* funding opportunity. The FOA provides \$25 million in competitive funding for WAP Grantees and Subgrantees (state, local, or Tribal governments) and non-profit organizations, with a \$2 million maximum per award.

In the DOE STEM Rising section of this month's e-note is the announcement of registration being now open for the 34th National Science Bowl. More information about the competition and how to apply can be found by visiting the link on the story below or [here](#).

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. Please also check final deadline dates with original links.

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— Sincerely, The NETL RWFI Team

Workforce Funding Announcements

FUNDING SPOTLIGHT



Bipartisan Infrastructure Law (BIL) Weatherization Program Assistance (WAP) Enhancement & Innovation

U.S. Department of Energy, Jan. 5, 2023

This Funding Opportunity Announcement (FOA) is for the Weatherization Assistance Program (WAP) Enhancement & Innovation grant, in support of Section 40551 of the Bipartisan Infrastructure Law (BIL), issued by the U.S. Department of Energy (DOE)'s Office of State and Community Energy Programs (SCEP). This FOA provides \$25 million in competitive funding for WAP Grantees and Subgrantees (state, local, or Tribal governments) and non-profit organizations, with a \$2 million maximum per award. This FOA seeks applications to expand the impact of DOE's existing residential weatherization programs by utilizing leveraged resources and enhanced community partnerships

to perform deep energy retrofits of low-income residential buildings and empower local community representation within the energy workforce. DOE seeks proposals that drive innovative approaches to program coordination and service delivery, while fostering the collaboration of dynamic and diverse teams.

OSD ManTech Program, Manufacturing Education and Workforce Development

Department of Defense, Deadline, Nov. 6, 2023

The purpose of this NFO is to facilitate the OSD ManTech mission broadly and specifically to deliver the public benefit inherent in the promotion of education and training of the defense manufacturing workforce. OSD ManTech seeks applications from organizations regarding mechanisms and organizational structures needed to identify and categorize the advanced manufacturing workforce, implement and research the effectiveness of advanced manufacturing education and training programs and/or methods, Science, Technology, Engineering, and Mathematics (STEM) education, outreach, and/or workforce development initiatives specific to defense advanced manufacturing.

University Turbine Systems Research (UTSR)

U.S. Department of Energy, Deadline, Nov. 7, 2023

The UTSR Program encompasses a portfolio of gas turbine-focused university projects which address a wide variety of technical topics (including combustion, aerodynamics/heat transfer, and advanced materials topics) by conducting cutting edge R&D.

2023 Funding Opportunity Announcement for Energy Future Grants (EFG) Creating a Community-Led Energy Future

U.S. Department of Energy, Deadline, Nov. 10, 2023

The Energy Future Grants (EFG) provides \$27 million in financial assistance to support local, state, and tribal government-led partnership efforts that will advance clean energy program innovation. EFG seeks to enhance energy affordable and access for communities, ensuring the broad benefits of a clean energy economy—including health, economic development and jobs and emissions reductions—flow to disadvantaged communities.

BIL 41003c-Critical Material Innovation, Efficiency, and Alternatives

U.S. Department of Energy, Deadline, Nov. 10, 2023

The Funding Opportunity Announcement (FOA) will build on prior the Department of Energy (DOE), other government agency, and private sector investment, and implements section 7002(g) of the Energy Act of 2020 and BIL section 41003(c) through the program's research and development activities by the creation of innovative methods

and technologies for the efficient and sustainable provision of critical materials to the domestic economy and the expected activities under the program to mitigate the environmental and health impacts of the extraction, processing, manufacturing, use, recovery, and recycling of critical materials. Also, section 41003 (c) of the BIL and section 7002 (g) of the Energy Act of 2020 directs the establishment of a program of research, development, demonstration, and commercialization.

Fossil Energy Based Production, Storage, Transport and Utilization of Hydrogen Approaching Net-Zero or Net-Negative Carbon Emissions

U.S. Department of Energy, Deadline, Nov. 12, 2023

This FOA is a modification to the funding opportunity announcement DE-FOA-0002400 previously titled Fossil Energy Based Production, Storage, Transport and Utilization of Hydrogen Approaching Net-Zero or Net-Negative Carbon Emissions. The current modification titled Clean Hydrogen Production, Storage, Transport and Utilization to Enable a Net-Zero Carbon Economy aims to continue advancement in hydrogen technologies that are capable of improving performance, reliability, and flexibility of existing and novel methods to produce, transport, store and use hydrogen in support of the nationwide goals of reducing greenhouse gas pollution associated with energy use by 2030 and achieve economy-wide net-zero emissions by 2050.

Broadening Participation in Engineering

National Science Foundation, Deadline, Nov. 15, 2023

Through the Broadening Participation in Engineering (BPE) Program, NSF seeks to strengthen the future U.S. engineering workforce by enabling and encouraging the participation of all citizens in the engineering enterprise. The BPE Program seeks to support not only research in the science of broadening participation and equity in engineering, but also collaborative endeavors which foster the professional development of a diverse and well-prepared engineering workforce as well as innovative, if not revolutionary, approaches to building capacity through inclusivity, and equity within the engineering academic experience.

BIL: Carbon Capture Technology Program Front End Engineering and Design for Carbon Dioxide (CO₂)

U.S. Department of Energy, Deadline, Nov. 16, 2023

This funding opportunity announcement (FOA) will fund Front-End Engineering and Design (FEED) studies that support and accelerate the planning for CO₂ transport by a variety of modes. Due to the immediate need for CO₂ transport servicing multiple points of capture and one or more points of storage, the first round of solicited applications will prioritize CO₂ pipeline projects with two or more carbon capture sources connected to one or more secure geologic storage locations and/or to one or more CO₂ conversion locations. The CO₂ must be derived only from anthropogenic sources which could include CO₂ derived by direct capture from ambient air and must be delivered to CO₂ conversion sites or secure geologic storage facilities.

Innovative Water Infrastructure Workforce Development Grant Program

Environmental Protection Agency, Deadline, Nov. 17, 2023

The nation has made significant progress in addressing environmental and public health needs over the past fifty years, but more remains to be done. To further the goal of ensuring a strong pipeline of skilled and diverse workers in the water utilities sector, Congress, under the American Water Infrastructure Act of 2018, authorized the U.S. Environmental Protection Agency (EPA) to develop a grant program under Section 1459E of the Safe Drinking Water Act, to accelerate career pipelines in the water utilities sector and provide access to water utility workforce opportunities. In addition, under Clean Air Act Section 138(b)(2), which was created by the Inflation Reduction Act (IRA), Congress authorized EPA to award grants for workforce development activities that help reduce green-house gas emissions and other air pollutants that benefit disadvantaged communities as defined by the EPA Administrator and we are soliciting projects for this under project area 6 in Section I.C. of this Request for Applications (RFA).

Louis Stokes Alliances for Minority Participation (LSAMP)

National Science Foundation, Deadline, Nov. 17, 2023

The LSAMP program is an alliance-based program. The program's theory is based on the Tinto model for student retention referenced in the 2005 LSAMP program evaluation. The overall goal of the program is to assist universities and colleges in diversifying the nation's STEM workforce by increasing the number of STEM baccalaureate and graduate degrees awarded to populations historically underrepresented in these disciplines: African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders. LSAMP's efforts to increase diversity in STEM are aligned with the goals of the federal government's five-year strategic plan for STEM education, *Charting a Course for Success: America's Strategy for STEM Education*.

Carbon Management

U.S. Department of Energy, Deadline, Nov. 20, 2023

This funding opportunity announcement (FOA) aims to expand the Department of Energy, Office of Fossil Energy and Carbon Management's (DOE FECM's) carbon management portfolio through support for research and development (R&D) projects in the programmatic areas of Point Source Carbon Capture and Carbon Storage.

Innovative Technologies to Eliminate Flaring from Oil and Natural Gas Production

U.S. Department of Energy, Deadline, Nov. 27, 2023

The objective of this FOA is to competitively solicit cost-shared research proposals for pilot-scale field deployment and validation of efficient, cost-effective solutions ready for pre-commercialization that can eliminate flaring and non-safety related venting of natural gas at the well site.

BIL Consumer Electronics Battery Recycling, Reprocessing, and Battery Collection

U.S. Department of Energy, Deadline, Nov. 29, 2023

This Funding Opportunity Announcement will provide funding to support the recycling of consumer electronics batteries and battery-containing devices to help build a robust domestic critical material supply chain for electrovoltaic batteries in the United States. The program will accomplish this by increasing participation by consumers in recycling programs; improving the economics of consumer battery recycling to create a market for recycling, including battery recycling research, development, and demonstration activities to create innovative and practical approaches to increase the reuse and recycling of batteries; and increasing the number of these programs, including state and local programs to assist in the establishment or enhancement of state consumer electronics battery collection, recycling, and reprocessing programs and to establish collection points at retailers.

Domestic Manufacturing Conversion Grants

U.S. Department of Energy, Deadline, Nov. 30, 2023

This is a notice of intent DE-FOA-0003113 associated with FOA for Domestic Manufacturing Conversion Grants. This notice of intent is issued for informational purposes only and DOE is not seeking comments on the information contained in this notice.

Storage Innovations 2030: Technology Liftoff

U.S. Department of Energy, Deadline, Dec. 4, 2023

The Department of Energy National Energy Technology Laboratory, on behalf of the Office of Electricity is releasing Storage Innovations 2030 Technology Liftoff. SI Liftoff will build upon the strategic efforts initiated in the other three pillars of SI 2030 Framework, Prize, and Flight Paths, by fostering diverse partnerships of companies to pursue pre-competitive research and development projects. Entities will be awarded up to \$5 million for projects that (a) create research partnership to bring together two or more technology stakeholders, and (b) partner with a research institution to solve one or more pre-competitive R&D technical challenge. Projects must enable a long-duration capable energy storage technology with a pathway to \$0.05/kWh Levelized Cost of Storage by 2030. Modification 000001 is to define what is considered to be a Research Institution under the FOA and to inform prospective applicants of an upcoming informational webinar.

University Turbine Systems Research (UTSR)

U.S. Department of Energy, Deadline, Dec. 5, 2023

The University Turbine Systems Research (UTSR) Program encompasses a portfolio of gas turbine-focused university projects which address a wide variety of technical topics (including combustion, aerodynamics/heat transfer, and advanced materials topics) by conducting cutting edge R&D.

Industry-University Cooperative Research Centers Program

National Science Foundation, Deadline, Dec. 13, 2023

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.

Advancing U.S. Thin-Film Solar Photovoltaics

U.S. Department of Energy, Deadline, Dec. 18, 2023

The Advancing U.S. Thin-Film Solar Photovoltaics FOA will focus on accelerating the capabilities of two thin-film photovoltaic (PV) technologies: metal-halide perovskite PV and cadmium telluride (CdTe) PV technologies. It will fund innovative industrial research and development (R&D) projects that will enable future commercialization of hybrid tandem perovskite PV, defined as a perovskite PV in combination with another technology such as silicon or CdTe. It will also fund industrial research, development, and demonstration (RD&D) projects across the materials, equipment, installation, and performance monitoring sectors to improve the competitiveness of the domestic CdTe PV industry. This FOA promotes American leadership in thin-film PV technology by promoting the domestic manufacture of thin-film PV modules. With this goal in mind, only for-profit entities and teams led by for-profit entities may apply to this FOA (see Section III.A for more details on eligibility criteria) and all work must be performed in the United States (see Section IV.I.iii. and Appendix C).

NETL News



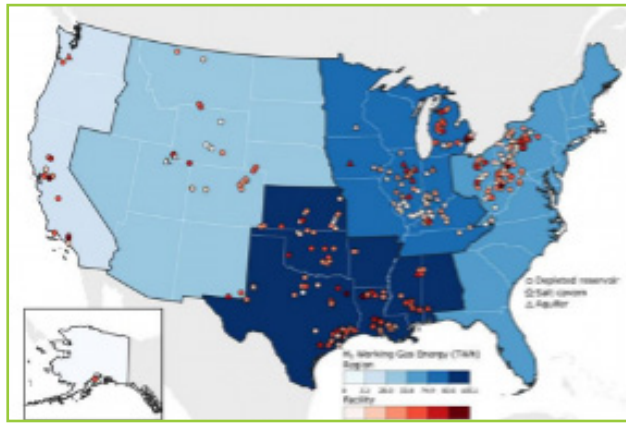
NETL Advances Transformation in North Dakota Through Revolutionary Uses for Lignite in the Extraction of Rare Earth Elements and Critical Minerals

NETL experts recently joined U.S. Department of Energy (DOE) Office of Fossil Energy and Carbon Management (FECM) leaders in North Dakota to learn about the development of technologies that can harness the state's massive reserves of lignite coal to extract key rare earth elements (REEs) and critical minerals (CMs), which are needed to manufacture nearly all high-tech devices and are critical to the clean energy economy.



NETL Study Addresses Challenges in Supercritical Carbon Dioxide Power Generation

NETL researchers are working to overcome key challenges associated with supercritical carbon dioxide (sCO₂) power cycles, which will help advance next-generation power systems, such as the NETL-supported Supercritical Transformational Electric Power (STEP) pilot plant, that could help achieve a decarbonized energy future.



NETL Researcher Addresses Underground Hydrogen Storage at National Academies Event

An NETL researcher who leads a multi-national laboratory effort to determine the viability, safety, and reliability of storing hydrogen in subsurface environments recently told an international audience of National Academy Committee on Earth Sciences that hydrogen’s potential as a flexible fuel for many end users depends upon a reliable system of subsurface storage facilities.



NETL Scientist Participates in Research Experience in Carbon Sequestration Program

An NETL researcher gathered invaluable knowledge and experience by participating in the annual Research Experience in Carbon Sequestration (RECS) program — a carbon capture, utilization and storage (CCUS) education program designed to help graduate students and early career professionals expand their knowledge and grow a collaborative network.



Leadership West Virginia Visits NETL-Morgantown

Members of the current class of Leadership West Virginia recently visited NETL-Morgantown and toured some of the Lab’s most impactful equipment and technologies that are making a sustainable energy future a reality.



NETL’s Transformer Watchman Wins R&D 100 Award

An innovative sensor technology, developed by NETL and its partners at the University of Pittsburgh and the Pittsburgh-based company Sensible Photonics Inc. that can protect the Nation’s energy infrastructure, help save lives, and save the economy billions of dollars.



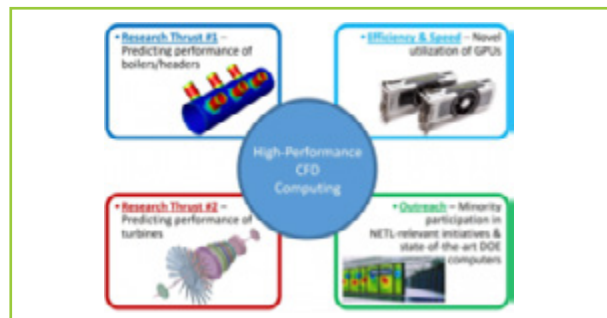
NETL Oversees Landmark Research To Protect Caprock Integrity at Carbon Storage Sites

A groundbreaking experiment completed with NETL oversight is expected to generate important insights about the behavior of faults and other seismic activity when carbon dioxide (CO₂) — a greenhouse gas — is injected into geologic formations.



NETL Launches Multidisciplinary Project To Advance Direct Air Capture Technology

NETL has initiated a four-year plan to develop a direct air capture (DAC) process that integrates expertise from the Lab's extensive materials design, computational materials design, computation fluid dynamics, and process system design research portfolios to advance a cutting-edge technology that will remove carbon dioxide (CO₂) from the atmosphere.



NETL-Supported Project Addresses Boiler Impingement with High Performance Computing

With NETL support, through the Lab's University Training and Research program, researchers at the University of California, Riverside used advanced computing models that harness machine learning to efficiently reduce impingement in boilers — an innovation that can ensure longer and more efficient service life for power plants and even potentially extend the lives of helicopter rotor blades or aircraft engine components.



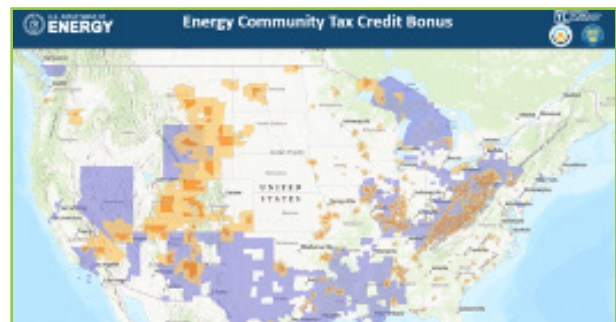
U.S. Department of Energy Announces \$17.5 Million to Advance Technologies that Capture Carbon Emissions to Decarbonize Industrial Processes and Produce Valuable Products

WASHINGTON, D.C. — The U.S. Department of Energy's (DOE) Office of Fossil Energy and Carbon Management (FECM) today announced up to \$17.5 million in funding to advance technologies that capture carbon dioxide (CO₂) from industrial facilities and power plants and convert those CO₂ emissions into valuable products.



Turbine Component Design Advanced at Penn State Facility Through NETL Collaboration

The National Experimental Turbine (NEXt) initiative, located at the Pennsylvania State University (Penn State) Steady Thermal Aero Research Turbine (START) Lab and supported by NETL and the U.S. Department of Energy (DOE) for more than a decade, has advanced turbine design to help modernize the nation's energy infrastructure and lead the way to fewer emissions in the power sector.



NETL Geo-data Helps Prioritize Energy Communities in America

With insights from custom mapping and data science analyses, NETL is helping prioritize energy communities and spotlight opportunities for economic improvement and environmental justice in a changing energy landscape.



DOE To Invest in Front End Engineering and Design (FEED) Studies for Multiple Carbon Dioxide Transport Modes

Washington — The U.S. Department of Energy’s Office of Fossil Energy and Carbon Management (FECM) today announced it is making up to \$27 million available through President Biden’s Investing in America agenda to support the transport of carbon dioxide (CO₂) captured from industrial and power generation facilities, as well as from legacy carbon dioxide emissions captured directly from the atmosphere, to locations for permanent geologic storage or conversion to useful products.

Reports and Resources



Improving Workforce Development and STEM Education to Preserve America’s Innovation Edge

Brookings Institute

There are many challenges facing the United States as it shifts from an industrial to a digital economy, but one of the most fundamental problems lies in regard to workforce development and Science, Technology, Engineering, and Math (STEM) education. New advances in robotics, artificial intelligence, and advanced manufacturing are automating jobs, *displacing workers*, and requiring new skills from Americans. Computer chips are crucial to many different sectors and the construction of new fabs already is facing employee shortages. With *skills gaps* in several areas, there could be constraints in coming years on the country’s ability fully to reap the advantages of a digital economy.

America Works Data Center

U.S. Chamber of Commerce

Right now, there are too many jobs without people to fill them. As a result, businesses can’t grow, compete, and thrive. The U.S. Chamber and Chamber Foundation’s *America Works* initiative is mobilizing business and government to swiftly address the crisis.

DOE STEM Rising



NNSA expands Minority Serving Institution and Tribal Education Partnership Programs to strengthen workforce capacity at Community and Junior Colleges

The *Minority Serving Institution Partnership Program (MSIPP)* and *Tribal Education Partnership Program (TEPP)* of the U.S. Department of Energy’s National Nuclear Security Administration (DOE/NNSA) awarded five grants totaling \$2.5 million to Minority-Serving Institutions (MSIs) and Tribal Colleges and Universities (TCUs) in response to Funding Opportunity Announcement DE-FOA-0002898: Community and Junior College Trade Occupation Program (CJCTOP).

DOE Announces Prize Winners in the First-Ever HBCU Clean Energy Education Prize

Today, the U.S. Department of Energy (DOE) announced the first 10 prize winners in the inaugural Historically Black Colleges and Universities (HBCU) Clean Energy Education Prize Inspire Track. Each HBCU team selected today will receive \$40,000 to support the development or enhancement of clean energy-focused summer programs for K-12 and community college students. This new prize supports President Biden’s *Justice40 Initiative*, which directs 40% of the overall benefits of certain federal investments to flow to disadvantaged communities by helping to build a diverse STEM (science, technology, engineering and math) pipeline to support America’s clean energy future.

Registration Now Open for Energy Department’s National Science Bowl®

Registration is open for the 34th National Science Bowl® (NSB), hosted by the U.S. Department of Energy (DOE) Office of Science. Thousands of students compete in the contest annually as it has grown into one of the largest academic math and science competitions in the country.

The U.S. Department of Energy Launches the AlgaePrize 2023-2025 Competition

The U.S. Department of Energy (DOE) *Bioenergy Technologies Office*, in partnership with the *Algae Foundation* and the *National Renewable Energy Laboratory*, are announcing the launch of the *AlgaePrize 2023-2025 Competition*, which challenges students to become the next generation of bioeconomy professionals by expanding novel solutions supporting gigaton-scale algae commercialization.

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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