

RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • MAY 2020

Welcome Message

Greetings NETL RWFI stakeholders,

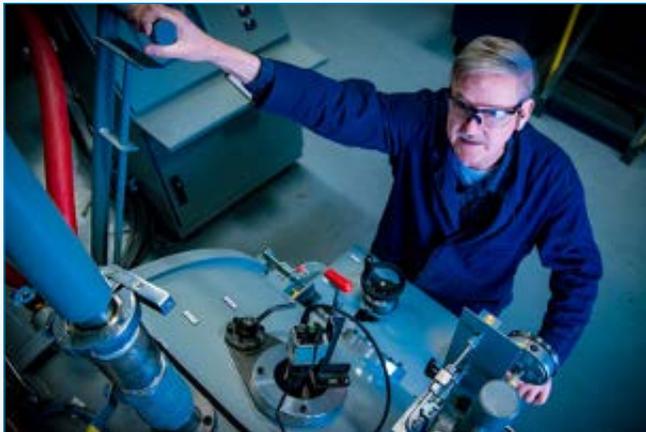
In this month's E-note, you will find a grant announcement in our funding in focus section, looking at the future of Manufacturing workforce from the National Science Foundation with a deadline of July 5, 2020.

If you missed our U.S Energy and Employment Report Briefing Webinar, you can see the recorded webinar by visiting our [webinar archives page](#) or by directly [clicking here](#). Also, in this month's E-note is a link to the [2020 U.S. Energy and Employment report](#).

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.

– Sincerely, The NETL Regional Workforce Initiative Team

Workforce Funding Announcements



Future Manufacturing

National Science Foundation, Deadline, July 5, 2020

Worldwide competition in manufacturing has been dominated in recent decades by the maturation, commoditization, and widespread application of computation in production equipment and logistics, effectively leveling the global technological playing field and putting a premium on low wages and incremental technical improvements. The next generation of technological competition in manufacturing will be dictated by inventions of new materials, chemicals, devices, systems, processes, machines, design and work methods, social structures, and business practices. Fundamental research will be required in robotics, artificial intelligence, biotechnology, materials science, sustainability, education and public policy, and workforce development

FY19 Funding Opportunity Announcement (FOA) for the Office of Naval Research (ONR) Navy Reserve Officers' Training Corps (ROTC) Cybersecurity Training Program

Office of Naval Research, Deadline, June 3, 2020

The ONR seeks a broad range of applications for augmenting existing or developing innovative solutions that directly maintain, or cultivate a diverse, world-class STEM workforce in order to maintain the U.S. Navy and Marine Corps' technological superiority. The goal of any proposed effort must provide solutions that will grow a capable and trained workforce with the skills to defend against emergent cyber and electronic warfare threats. Funding efforts will be targeted primarily toward projects addressing the technical skills taught to university students enrolled in ROTC programs; these ROTC programs are not restricted to any service. While this effort is targeted primarily toward students enrolled in ROTC programs, it can also include civilian students.

Higher Education Multicultural Scholars Program

U.S. Department of Agriculture, Deadline, June 29, 2020

The purpose of this competitive undergraduate scholarship grant program is to increase the multicultural diversity of the food and agricultural scientific and professional workforce and advance the educational achievement of all Americans by providing competitive grants to colleges and universities. Land-Grant institutions, colleges and universities having significant minority enrollments, other colleges and universities, and Institutes or research foundations maintained by an eligible college or university. Institutions that have not previously applied are especially encouraged to do so. Applicants must be institutions that confer a bachelor's or DVM degree in at least one of the disciplines in the food, agricultural, natural resource, and human sciences. Awards are made to eligible colleges and universities. Individuals are not eligible to apply for these grants.

to take the lead in this global competition. The research supported under this solicitation will enhance U.S. leadership in manufacturing far into the future by providing new capabilities for established companies and entrepreneurs, improving our health and quality of life, and reducing the impact of manufacturing industries on the environment. The goal of this solicitation is to support fundamental research and education of a future workforce that will enable Future Manufacturing — manufacturing that either does not exist today or exists only at such small scales that it is not viable.

National Science Foundation (NSF) Inclusion Across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES) Planning Grants

National Science Foundation, Deadline, July 13, 2020

Through this solicitation, NSF INCLUDES will support Planning Grants to build capacity for the development of collaborative infrastructure to: (a) facilitate innovative partnerships, networks, and theories of action for broadening participation in STEM at scale and (b) lead to the establishment of future centers, alliances, or other large-scale networks to address a broadening participation challenge. While this solicitation is open to all, NSF INCLUDES Design and Development Launch Pilots are especially encouraged to apply, as a Planning Grant could serve as an intermediate conduit for bringing their exploratory pilot work to scale.

Workforce Opportunity for Rural Communities (WORC)

U.S. Department of Labor, Deadline, July 29, 2020

This Announcement solicits applications for the WORC Initiative for grants serving the Appalachian and Delta regions. The purpose of this program is to demonstrate the alignment of regionally driven, comprehensive approaches to addressing economic distress and the necessary workforce development activities to ensure a workforce capable of succeeding in current and future job opportunities. Successful long-term economic growth strategies build upon bottom-up, community-led plans that promote economic resilience and maximize regional strengths. The WORC Initiative grants take a long-term view toward assisting eligible communities in diversifying their economies by investing in local strategies developed by regional partners. This long-term view also acknowledges the impact of the opioid crisis and the significant challenges it presents to a community's workforce. To address these challenges, the Employment and Training Administration encourages applicants to include within their applications strategies to address the employment and training needs of individuals affected by substance use disorder in their communities.

machine learning-based algorithms for the quantification of fugitive methane emissions — small leaks that typically go undetected along natural gas pipelines and at storage facilities. Locating and measuring the quantity of fugitive methane emissions will facilitate the natural gas industry to operate most responsibly. Methane quantification is also an important part of Leak Detection and Repair programs for the U.S. Environmental Protection Agency's inventory reduction and mitigation prioritization foci.



NETL Core Characterization: A Rock-Solid Success

Placed end to end, the total length of the rock core samples scrutinized last year by NETL researcher Dustin Crandall, Ph.D., and his colleagues would span roughly 10 football fields. Driving much of that impressive volume is the need to complete rock core characterization studies to support large-scale geologic carbon sequestration and to make that data available to the public. NETL supports projects to safely and permanently store carbon dioxide from power plants and other industrial sources by injecting it into deep underground reservoirs capped by layers of non-porous rock. These efforts not only reduce emissions of greenhouse gases; they also support continued use of abundant fossil fuels such as coal and natural gas in an environmentally responsible manner.

U.S. DOE to Provide \$6M for Research to Develop Energy Storage Technologies

The U.S. DOE's Office of Fossil Energy and NETL have announced up to \$6 million in federal funding for cost-shared research and development projects under the FOA DE-FOA-0002332, Energy Storage for Fossil Power Generation. The FOA seeks applications to (1) advance near-term, system-integrated, energy storage solutions toward commercial deployment with fossil assets; (2) mature promising mid-technology-readiness-level (TRL), component-level energy storage solutions toward eventual system integration with fossil assets; (3) develop innovative, low-TRL concepts and technologies that offer game-changing benefits for fossil assets. Energy storage combined with fossil energy assets offers a suite of benefits to asset owners, the electricity grid, and consumers. These benefits include a more reliable and affordable energy supply, cleaner environmental performance, and stronger energy infrastructure. The FOA seeks a variety of technology approaches to integrate fossil assets with thermal, chemical, and potential energy storage applications.

NETL News



NETL Project to Add Methane Emissions Quantification Capabilities

Tracking a methane plume associated with piping and equipment. NETL is expanding its methane leak detection technology work with the Southwest Research Institute of San Antonio, Texas, to use

NETL Supported REE Extraction Project Exceeds Expectations

The U.S. DOE prioritized the creation of a domestic supply of rare earth elements (REEs), and one of NETL's supported projects that may provide these vital resources using the Nation's abundant coal supplies has demonstrated favorable results. As part of an NETL-funded cooperative agreement, researchers from the University of Utah and Virginia Tech evaluated a new, low-cost technology to extract and recover an enriched, mixed REE oxide product from coal-based resources. The project team successfully obtained six different coal waste samples with REE concentrations that exceeded the project's requirement.

2020 Appalachian Community Philanthropy Leadership Retreat

Philanthropy West Virginia, June 8, 2020, at 1:15 p.m. and June 12, 2020, at 4:00 p.m. ET

Formerly known as the Appalachian Community Foundation's Leadership Retreat, the Appalachian Community Philanthropy Leadership Retreat is an opportunity to connect with Community Foundations, United Ways, and Hospital and University Foundations from across the Appalachian region to discuss key issues in the field, network, and learn from your peers from across the region and beyond.

Upcoming Workforce Conferences, Meetings, and Summits



Workforce Opportunity for Rural Communities (WORC) Initiative Pre-Application Webinars

Appalachian Regional Commission, Multiple Dates and Times, May/June 2020

The U.S. Department of Labor is making funds available via the WORC initiative to implement innovative approaches to provide enhanced training and support activities to dislocated workers, new entrants in the workforce, incumbent workers, and individuals affected by substance use disorder returning to work. Successful awards will support workforce development activities that prepare eligible participants for good jobs in high-demand occupations aligned with a state, regional, or community economic development strategy. Communities across Appalachia, especially those underserved by other resources, are encouraged to apply.

21st Century Grantmakers Essentials Program

Philanthropy West Virginia, June 2, 2020, 1:30–3:45 p.m. ET

Just because you are working from home or have restricted travel doesn't mean you have to miss out on this amazing program. Philanthropy WV has been working hard to finalize a new exciting format for the 21st Grantmakers Essentials session.

Reports and Resources



2020 U.S. Energy and Employment Report (USEER)

National Association of State Energy Officials & The Energy Futures Initiative

The U.S. Energy & Employment Report provides a unique window on the people who meet the Nation's energy needs, and identifies important trends and skill sets for the 21st Century energy workforce. The USEER survey is a supplement to Federal Bureau of Labor Statistics employment data and offers detailed information found nowhere else, making it an invaluable tool for policymakers, academic officials and business executives.

Clean Energy Unemployment Claims in COVID-19 Aftermath

E2, E4TheFuture, American Council of Renewable Energy, Department of Energy

Nearly 600,000 U.S. clean energy workers have lost their jobs since March after 447,208 new workers filed unemployment claims in April, according to the latest analysis of unemployment data by BW Research for E2, E4TheFuture, and the American Council on Renewable Energy.

DOE STEM Rising



Teens Pay it Forward, use 3D Printers Built at Sandia to Make Face Shields

Teens who built 3D printers during a weeklong robotics camp at Sandia National Laboratories last year have used them to make more than 3,000 face shields that have been donated to medical professionals and first responders in New Mexico. The camp was hosted by Sandia National Laboratory in collaboration with R4 Creating, a nonprofit organization that provides robotics and STEM opportunities for kids.

High school students: Hear from professionals at Fermilab Online STEM Career Expo

How does one go about becoming a scientist? What courses in college will help you become a mechanical engineer? Where could you get a job as a math major? What is the daily life of a computer engineer really like? The U.S. DOE's Fermi National Accelerator Laboratory offers its popular annual STEM Career Expo again this year — this time online. The recorded panel discussions are available online now on the STEM Career Expo webpage. Visit the page to hear from professionals working in fields that students might pursue in the coming years.



Welcoming New U.S. Clean Energy Education and Empowerment (C3E) Ambassadors

The DOE is excited to announce that 12 new Ambassadors have joined the U.S. C3E Initiative. The Ambassadors are distinguished senior executives, academics, government officials, and thought leaders that serve as role models and advocates for women in clean energy. The new Ambassadors bring an array of expertise, experience, and perspective to the group.

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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