

# RWFI E-NOTE MONTHLY

REGIONAL WORKFORCE INITIATIVE • JULY 2020

## Welcome Message

Greetings NETL RWFI stakeholders,

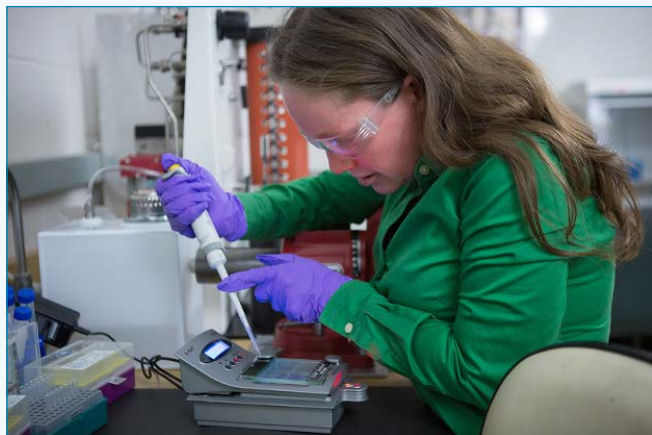
In place of this month's funding opportunity in focus, we have a request for information announcement from DOE and NETL. With a focus on high performance materials, the RFI seeks "information from industry, academia, research laboratories, government agencies, and other stakeholders relating to various fossil industry workforce challenges. Challenges include recent impacts on supply chains, recent and long-term reductions in fossil energy power generation capacity, and recent disruptions in oil & gas markets." Also included in this month's e-note is a COVID unemployment online tracking tool from Georgetown University's Center of Education and the Workforce.

As always, feel free to reach out to us at [NETL.RWFI@netl.doe.gov](mailto: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

FUNDING SPOTLIGHT



### *Understanding Workforce Development Needs for Activities Within the High-Performance Materials Supply Chain*

U.S. Department of Energy, National Energy Technology Laboratory, Deadline, August 31, 2020

The purpose of this Request for Information (RFI) is to seek information from industry, academia, research laboratories, government agencies, and other stakeholders relating to various fossil industry workforce challenges. Challenges include recent impacts on supply chains, recent and long-term reductions in fossil energy power generation capacity, and recent disruptions in oil & gas markets. FE seeks to understand the impacts of these challenges and to discover stakeholder views on mitigation solutions.

### *Rural Cooperative Development Grant (RCDG)*

U.S. Department of Agriculture, Deadline, August 3, 2020

The primary objective of the RCDG program is to improve the economic condition of rural areas by assisting individuals or entities in the startup, expansion or operational improvement of rural cooperatives and other business entities. Grants are awarded competitively on an annual basis to Rural Cooperative Development Centers who in turn provide technical assistance to individuals and entities.

### *Improving Undergraduate STEM Education: Education and Human Resources*

National Science Foundation, Deadline, August 4, 2020

The program seeks to support projects that have high potential for broader societal impacts, including improved diversity of students and instructors participating in STEM education, professional development for instructors to ensure adoption of new and effective pedagogical techniques that meet the changing needs of students, and projects that promote institutional partnerships for collaborative research and development. IUSE: EHR especially welcomes proposals that will pair well with the efforts of the National Science Foundation's Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES) to develop STEM talent from all sectors and groups in our society. For all the above objectives, the National Science Foundation invests primarily in evidence-based and knowledge-generating approaches to understand and improve STEM learning and learning environments, improve the diversity of STEM students and majors, and prepare STEM majors for the workforce. In addition to contributing to STEM education in the host institution(s), proposals should have the promise of adding more broadly to our understanding of effective teaching and learning practices.

### *The Energy Resource Governance Initiative (ERGI) Academy*

U.S. Department of State, Deadline, August 9, 2020

The Bureau of Energy Resources (ENR) of the U.S. Department of State announces an opportunity for organizations to submit applications to enter a Cooperative Agreement with ENR. This three-year Cooperative Agreement with ENR will focus on establishing the Energy Resource Governance Initiative (ERGI) Academy, a center for convening delegates from governments around the world to experience hands-on training in minerals governance topics of their choosing, as well as site visits to active mining operations to see these principles in action. To achieve this goal, the Recipient will provide delegates training and advisory support to strengthen institutional capacity in modern, best-in-class mining sector operations, management, regulation, and enforcement. Activities under this Cooperative Agreement will include course curriculum development and training, capacity-building, on-site mining site visits, technical advisory support for mining sector governance topics, and job shadowing.

### *Innovative Technology Experiences for Students and Teacher (ITEST)*

#### **National Science Foundation, Deadline, August 14, 2020**

ITEST is an applied R&D program providing direct student learning opportunities in pre-kindergarten through high school (PreK–12). The learning opportunities are based on innovative use of technology to strengthen knowledge and interest in STEM and information and communication technology (ICT) careers. To achieve this purpose, ITEST supports projects that engage students in technology-rich experiences that: (1) increase awareness and interest of STEM and ICT occupations; (2) motivate students to pursue appropriate education pathways to those occupations; and (3) develop STEM-specific disciplinary content knowledge and practices that promote critical thinking, reasoning, and communication skills needed for entering the STEM and ICT workforce of the future.

### *Funding Opportunity Announcement (FOA): Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers and Veteran Farmers and Ranchers*

#### **U.S. Department of Agriculture, Deadline, August 26, 2020**

The overall goal of the 2501 Program is to encourage and assist socially disadvantaged farmers and ranchers, veteran farmers and ranchers, and beginning farmers and ranchers with owning and operating farms and ranches and in participating equitably in the full range of agricultural, forestry, and related programs offered by the U. S. Department of Agriculture (USDA). In partnership with the Office of Partnerships and Public Engagement, eligible entities may compete for funding on projects that provide education and training in agriculture, agribusiness, forestry, agriculturally related services, and USDA programs and to conduct outreach initiatives designed to accomplish those goals. See attached package for additional information.

### *Industry-University Cooperative Research Centers (IUCRC) Program*

#### **National Science Foundation, Deadline, September 8, 2020**

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.

### *1890 Institutional Teaching, Research, and Extension Capacity Building Grants (CBG) Program*

#### **U.S. Department of Energy, Deadline, September 10, 2020**

The 1890 CBG is intended to strengthen teaching, research and extension programs in the food and agricultural sciences by building the institutional capacities of the 1890 Land-Grant Institutions, including Tuskegee University, West Virginia State University, and Central State University (per Section 7129 of Pub. L. 113-79). The CBG program supports projects that strengthen teaching programs

in the food and agricultural sciences in the need areas of curriculum design and materials development, faculty development, and others. CBG supports projects that strengthen research and extension programs in need areas of studies and experimentation, extension program development support systems, and others. The CBG also support integrated project grants. The intent of this initiative is to increase and strengthen food and agriculture sciences at the 1890s through integration of education, research and extension. Applications submitted to CBG must address at least one of the following National Institute of Food and Agriculture strategic goals: sustainable bioenergy, food security, childhood obesity prevention, or food safety.

### *Economic Development Research and National Technical Assistance FY18–FY20*

#### **U.S. Department of Commerce, Economic Development Agency, Deadline, September 30, 2020**

Through the Research and Evaluation program, The Economic Development Agency (EDA) builds the knowledge base for sound, market-driven regional and local economic development. This work is critical to ensure that EDA's initiatives and investments are consistent with current best practices in economic development. Program evaluations ascertain EDA's impact on measures such as return on taxpayer investment; private capital investment leveraged; and the creation of higher-skill, higher-wage jobs. Projects under the Research and Evaluation program may be carried out through grants or cooperative agreements, as well as through studies conducted in-house, to maximize the impact of this modestly funded program.

### *Advanced Technical Education Program*

#### **National Science Foundation, Deadline, October 1, 2020**

With an emphasis on two-year Institutions of Higher Education (IHEs), the Advanced Technological Education (ATE) program focuses on the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions (grades 7-12, IHEs) and industry to promote improvement in the education of science and engineering technicians at the undergraduate and secondary institution school levels. The ATE program supports curriculum development; professional development of college faculty and secondary school teachers; career pathways; and other activities. The program invites research proposals that advance the knowledge base related to technician education. It is expected that projects will be faculty driven and that courses and programs credit bearing, although materials developed may also be used for incumbent worker education.

### *Strengthening Community Colleges (SCC) Training Grants*

#### **Department of Labor, Employment, Labor and Training, Deadline, October 8, 2020**

The SCC Training Grants program will build the capacity of community colleges to collaborate with employers and the public workforce development system to meet local and regional labor market demand for a skilled workforce. The purpose of this grant is (1) to increase the capacity and responsiveness of community colleges to address the skill development needs of employers and dislocated and unemployed workers, incumbent workers, and new entrants to the workforce; (2) to offer this spectrum of workers and other individuals accelerated career pathways that enable them to gain skills and

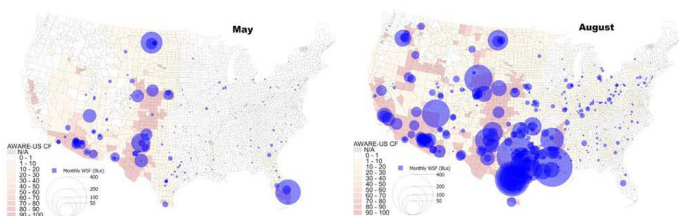
transition from unemployment to (re)employment quickly; and (3) to address the new challenges associated with the COVID-19 health crisis that necessitate social distancing practices and expanding online and technology-enabled learning and migrating services to a virtual environment.

NETL News



*DOE Issues a Request for Information about Hydrogen Technology Opportunities and Research Needs*

DOE's FE and NETL have issued an RFI about hydrogen technology opportunities and research needs that could lead to advances in hydrogen technologies. Advances in hydrogen technologies that are capable of improving overall performance, reliability, and flexibility of existing technologies to produce, transport, store, and use hydrogen will enable the United States to continue to extract maximum economic value from its fossil-fueled energy system assets. It will also allow the United States to produce carbon-neutral hydrogen and eliminate the carbon footprint often associated with fossil energy use. In this RFI, DOE is specifically interested in gathering information relevant to five topic areas: (1) natural gas hydrogen production, transport, and storage; (2) hydrogen production from gasification of fossil fuel and other materials, especially waste plastics and biomass; (3) hydrogen turbines; (4) hydrogen storage; and (5) hybrid energy systems with reversible solid oxide fuel cells to produce hydrogen.



*NETL Co-Develops New Model for Sustainable Freshwater Use by Power Plants*

A new model developed by Argonne National Lab and NETL, with support from DOE's FE, will help communities balance the often-competing demands for water use among the power, agricultural, industrial, and residential sectors. Most thermoelectric power plants in the U.S. rely on fresh water for cooling, resulting in significant water consumption, which can be a problem when local water supplies are scarce, and those plants also draw on the same sources as nearby communities for use in daily life.



*DOE Issues Request for Information on Workforce Development Needs Within the High-Performance Materials Supply Chain*

The U.S. DOE's FE and NETL has issued an RFI to understand workforce development needs within the high-performance materials supply chain. The advanced materials supply chain consists of four segments — alloy production, shaping, finishing, and component assembly. In the fossil energy industry, these segments create high-paying jobs and contribute to a secure energy supply in the United States. However, recent events and disruptions have shifted the focus of manufacturing needs. A workforce skilled in additive manufacturing, novel joining, and welding, robotics, and automated production is required to maintain and grow a robust advanced materials supply chain. This RFI seeks information to identify the most pressing workforce needs and gaps, match skills with employment needs, and establish training programs and curricula. The collected information/data will then be used to create a targeted workforce that can address immediate demands and strengthen lasting capacity for fossil fuel applications.

Reports and Resources



*Tracking COVID-19 Unemployment and Job Losses*

The COVID-19 pandemic caused a sudden recession, leaving millions of workers unemployed. Explore unemployment rates and job loss numbers by education level, age, race, gender, industry, and occupation. Workers across the country have been devastated by the economic downturn caused by the coronavirus pandemic. After business closures and other restrictions began in March, unemployment began to rise sharply, peaking in April before starting to fall slowly. Cumulative job losses reached 23 million in May.

*Minority Serving Institutions: America's Underutilized Resource for Strengthening the STEM Workforce*

**National Academies of Science, Engineering, and Medicine**

There are over 20 million young people of color in the United States whose representation in STEM education pathways and in the STEM workforce is still far below their numbers in the general population. Their participation could help re-establish the United States' preeminence in STEM innovation and productivity while also increasing the number of well-educated STEM workers.

*Building Capacity for Teaching Engineering in K-12 Education*

**National Academies of Science, Engineering, and Medicine**

Engineering education is emerging as an important component of U.S. K-12 education. Across the country, students in classrooms and after- and out-of-school programs are participating in hands-on, problem-focused learning activities using the engineering design process. These experiences can be engaging; support learning in other areas, such as science and mathematics; and provide a window into the important role of engineering in society. As the landscape of K-12 engineering education continues to grow and evolve, educators, administrators, and policy makers should consider the capacity of the U.S. education system to meet current and anticipated needs for K-12 teachers of engineering.



*STEM Rising Postcards & Coloring Books*

STEM studies are the essential building blocks to accomplishing the DOE's mission from coast to coast. STEM Rising is our initiative to inspire, educate, and spark an upwards trajectory to lifelong success in STEM through sharing the Department's National Labs, National Nuclear Security Administration (NNSA), and program office's programs, resources, competitions, events, internship opportunities and more.



*Apply for Solar Decathlon's 2021 Design Challenge, Plan for 2023 Build Challenge*

The DOE Solar Decathlon is ready to see your innovative and creative building designs! Collegiate institutions may now apply for the 2021 Design Challenge. Applications are due by October 20, 2020. The 2021 Design Challenge Rules may be found in the newly released Solar Decathlon Competition Guide.



*NNSA Administrator recruits a workforce for the future*

NNSA Administrator Lisa E. Gordon-Hagerty recently took the opportunity to speak to a very important audience. Was it a foreign delegation, or a meeting of Cabinet members? No – it was the next generation of nuclear security experts, and likely the future of NNSA's workforce. Many in Washington, D.C., are familiar with the *Center for Strategic and International Studies* (CSIS), a bipartisan, nonprofit think tank. In 2003, CSIS established the *Project on Nuclear Issues*. Through outreach, research, mentorship, and respectful debate, PONI seeks to prepare future leaders to tackle the challenges of nuclear security.

**DOE STEM Rising**



*How STEM Drives Business — and Our Futures*

The acronym STEM has become commonplace, with science, technology, engineering, and mathematics jobs rising rapidly, paying competitively, and offering exciting and meaningful work opportunities. That is why STEM was the topic at hand in Columbus, Ohio during a Business Roundtable with the Secretary of Energy.

## 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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